# SOLID WASTE MANAGEMENT IN COASTAL COMMUNITIES BASED ON LOCAL WISDOM "MERESIK" IN TAPAK KUDA VILLAGE, THE DISTRICT OF TANJUNG PURA, LANGKAT

# A. Hadian Pratama Hamzah<sup>1</sup>, Sutrisno Anggoro<sup>2</sup>, Sri Puryono<sup>3</sup>

<sup>1</sup> Post Graduate Program Environmental Sciences, Universitas Diponegoro
<sup>2</sup> Water Resources Management Faculty Leaders of Fisheries and Marine, Universitas Diponegoro
<sup>3</sup> Post Graduate Program Environmental Sciences, Universitas Diponegoro
Email: <u>hadi.dian@yahoo.com</u>

#### ABSTRAK

Kegiatan manusia menghasilkan limbah padat, masalah ini dapat diatasi dengan pengelolaan sampah. Penelitian ini bertujuan mengidentifikasi bentuk-bentuk kearifan lokal dan mengukur tingkat partisipasi masyarakat. sampel sebanyak 72 orang dan wawancara tokoh kunci 10 orang, teridentifikasi kearifan lokal di Desa Tapak Kuda adalah konservatif yang disebut Meresik, nilai kepatuhan terhadap larangan membuang sampah di laut dan hutan mangrove merupakan salah satu bentuk pelanggaran norma adat di lingkungan, Tingkat partisipasi masyarakat 72% termasuk dalam kategori tinggi. Masyarakat menyadari bahwa kearifan lokal reseptif merupakan budaya yang berperan penting dalam menjaga kondisi lingkungan dan ini dipengaruhi oleh norma agama.

*Kata kunci:* Kearifan lokal, Pengelolaan lingkungan, Sampah Padat, Partisipasi Mayarakat

#### **ABSTRACT**

Human activities produce solid waste, this problem can be overcome by waste management. This study aims to identify forms of local wisdom and measure the level of community participation. a sample of 72 people and interviews with 10 key figures, it is identified that local wisdom in Tapak Kuda Village is conservative called Meresik, the value of compliance with the prohibition of littering in the sea and mangrove forests is a form of violation of customary norms in the environment, 72% community participation rate belongs to the high category. The community realizes that receptive local wisdom is a culture that plays an important role in maintaining environmental conditions and this is influenced by religious norms.

*Keywords:* Local wisdom, Environmental management, Solid Waste, Community Participation.

### INTRODUCTION

This decade of development in all fields carried out, economic continues to be development, physical development, civilization, health, education, and human attitude continue to develop to create a healthy and sustainable global life ((Scavarda, Caiado, & Avezedo, 2019;233)). From many researchers' views on humans by selfimprovement and socio-environmental conditions (Bashkirova & Lessovaia, 2019;272), where the formation of human attitudes and perceptions comes from educational values, understanding norms and values as well as the ability to receive information (Ferronato & Torretta, 2019;2). With the development of life in society, cultural values are sidelined (Halimatussadiah, Muhammad, & D, 2017;1(1)), but culture as the root of the development of human civilization is one of the factors of human life and environmental sustainability globally (Clark, 2018). Coastal Condition is a place of human civilization that lives in two places where a part of the community builds a yard as a residence and many also live on the coast as a place to do life activities ( Lestari & Trihadiningrum, 2019;149). The pattern of livelihood as fishermen is an adaptation of human life as a way of survival from the aspect of work effort (Meylan, A, & J, 2018;25). Not a few people who live on the coast are also transmigrant communities who have no place in urban areas (G & A, 2018), so the environmental problems that previously occurred in many cities then shifted in the coastal areas (Stingl, 2018;1).

Human activities in an area produce impacts, both changes in land area, infrastructure development, population density in one area and the worst is the decline in environmental quality due to pollution in water, air, and soil due to liquid and solid waste (Bursea, 2015;10(3)). The diversity of human activities such as livelihoods, socio-cultural interactions, and development are the initial stages of the impact of the emergence of overconsumption where consumption activities bring in residual products in the form of solid waste or water (E & N, 2018;25). The world globally is now faced with two environmental challenges namely environmental damage due to the increasing amount of solid waste that cannot be recycled and the consumptive habits of the community in meeting the needs of an unhealthy and environmentally friendly life (H.P, 2018;1(1)).

Disorganized garbage causes the accumulation of garbage in an area. Generally, environmental impacts can be felt through a

decrease in aesthetic value, the spread of disease vectors and the occurrence of social problems such as the emergence of garbage collection workers who are not equipped with an appropriate understanding of waste segregation and causing illness to themselves and transmitting it to others (Hynes, Tinch, & Hanley, 2013;3). This condition does not only occur in urban areas but also in coastal areas which range from disaster-prone areas to global security conditions due to infiltration of terrorists and other crimes and areas that have escaped government surveillance due to inaccessible access, making coastal areas have many vulnerabilities in terms of regional defense (Lautetu1, Kumurur, & Warouw, 2019;6(1)). Coastal areas are also often a path for the removal of domestic and shipped waste from outside countries, while disease-carrying vectors perched on solid waste have the possibility of falling in locations that pass the supply chain as one pile of garbage moves in one region to another (Rodrigo Goyannes Gusmão Caiado, Walter Leal Filho, & Osvaldo Luiz Gonçalves, 2019;198).

Physical development also needs to be balanced with the development of conservative character because it is a form of harmonization in achieving the growth rate of development, the number of employment opportunities, equality in obtaining services, and harmonization of people and the environment (Ahli, payman, & searcy, 2015;5). As a result of human consumption in coastal areas that are not accompanied by the understanding of conservation is the beginning of environmental damage and reduce the level of human health, mainly influenced by toxins in the environment either from liquids, gases or pollutants that pollute the waters (Federica, Margherita, & maria, 2018;172). The pattern of moving people from one location to another causes a reduction in the water catchment area and a decrease in land area (Fu Chen1, Zhanbin Luo, & Gang-Jun Liu, 2018). Contamination from the results of solid waste can occur due to uneven population, understanding of the form of packaging use, environmental awareness and patterns of shrinkage of waste that do not touch up to the level of a family home, this certainly has an impact on the availability of land in the landfill and how to do it the destruction of solid waste. There are many methods in solid waste management, in addition to being recycled and reused, unfortunately, the community has the perspective that the use of new goods is more attractive than processed products or recycle (Audil Rashid, Ayesha Irum, & Ikram Ali Malik, 2018;170).

Sometimes the interests of the region and the enforcement of regulations also do not take full advantage of the environmental sustainability of waste present, changing people's behavior about the importance of waste management and limits on consumption are not always successful because producers as business people also take a large role in the availability of public goods that produce waste but goods produced not environmentally friendly (W.C. LI, 2016;1). It has been nearly 3 decades that coastal areas have experienced vulnerability in disasters, such as seawater intrusion due to erosion of the coast because there is no mangrove forest as a green belt or coastal buffer zone. Due to high orders for aesthetic housing business that is high in aesthetics, the mountainous and coastal areas are strategic locations in meeting consumer expectations, unfortunately, the development undertaken is also not balanced with the concept of environmentally friendly and sustainable (Leigh & Li, 2015;106). the development carried out does not pay attention to regional spatial plans due to a lack of law enforcement in coastal zone areas (Buitra, William, & Victor, 2020;153).

The concept of solid waste management through cultural approaches has not been used as an alternative solution to the current global problem of waste, the application of technology and various methods have also been developed, one of which is a platinum-producing machine that is easily destroyed in a matter of a few years (Khalil, Berawi, & Heryanto, 2019;105), but humans are the main actors in the creator of the impact of consumption is not involved as a problem-solving actor in dealing with garbage piles, humans only become actors in the destruction of the waste but not as agents of behavior change to change the situation. Culture is rooted, has strong values, and is difficult to change unless there is a massive revolution about human behavior but it is difficult to happen. Humans can adapt well to housing and forms of interaction so that humans have the potential to change a situation through firm values held in strong, local wisdom or commonly called local knowledge is a pattern of simple understanding of an activity that is carried out continuously and derived from the form of stories and experiences (Kumar, Smith, & Fowler, 2017;4(3)), it's just that the empirical value needs to be tested, but mostly local wisdom about environmental management, human attitudes in interacting, ways of consuming food and lifestyle usually contain good values and causal phenomena (Sinthumule & Mkumbuzi, 2019;1). Research

related to the form of local wisdom of coastal communities in solid waste management is a form of empirical fact-finding that the conception of values held for generations in the form of conservation is one of the efforts in maintaining the sustainability of human life in an area. This study has two general objectives, namely, to identify forms of local wisdom in Tapak Kuda Village, Tanjung Pura to manage solid waste through habits and values passed down on a generational basis. Second, find facts related to how large the level of participation of coastal communities in Tapak Kuda Village in the management of solid waste in the environment they live in as an effort to maintain health, create environmental sustainability and continue the tradition of a receptive concept that is carried out as a cultural approach in solid waste management.

# METHOD

This research was conducted in 2019 in Tapak Kuda Village, Tanjung Pura, Langkat. Demographic conditions are coastal areas surrounded by sea and mangrove forests, motorcycle taxi selection is carried out with a visit and initial observations related to the condition of the object of research. The nature of the research is interpretive descriptive. This research will describe the form of local wisdom that is inhaled by the community in the management of solid waste in the village environment. Interpretation is carried out through data analysis and descriptions of the results of interviews related to norms, values, and ideas/ideas that underlie the continued local wisdom at the location of research, the results of the measurement of the level of participation will be presented in tabular form and interpreted from the findings obtained. Samples were taken by random sampling, the sampling technique used was purposive with the main criteria being the people who have lived in the location for 20 years totaling 60 samples, related to key figures to explore information related to management forms and values in local wisdom dimmable 10 sources. Data collection techniques carried out through observation, questionnaires, and in-depth analyzed with interviews. Data were data triangulation and descriptive analysis, the data is presented in tabular form and description of the findings to draw logical conclusions.

## **RESULTS AND DISCUSSION**

### Result

Tapak Kuda Village is a conservation area that is regulated according to the buffer zone of the

coastal area which can be seen in Figure 1. About the Conservation Area of Tapak Kuda Village.

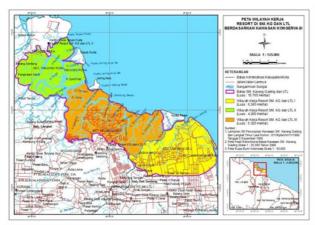


Figure 1 Conservation Area of Tapak Kuda Village

Based on the social demographic conditions of the community, Tapak Kuda Village, Tanjung Pura, Langkat can be described in Table 1.

**Table 1.** Percentage of Community Characteristicsin Solid Waste Management in TapakKuda Village

| Community       | Majority   | Percentage |
|-----------------|------------|------------|
| Characteristics |            | %          |
| Adult age (36-  | 55 peoples | 92%        |
| 60 years old)   |            |            |
| Education       | 28 Peoples | 46%        |
| (SMA Level)     |            |            |
| Tribe (malay)   | 50 Peoples | 84%        |
| Occupation      | 17 Peoples | 29%        |
| (fisherman)     |            |            |
| Gender          |            |            |
| Male            | 20 Peoples | 22.3%      |
| Female          | 40 Peoples | 66.6%      |

From the results of the region, it can be seen that there are many roles of women in solid waste management activities. As for the management of solid waste the community has an unwritten flow but is carried out together such as the division of tasks and work output achieved every Friday in a customary activity called "Meresik". As for the description of the work scheme consisting of types of work, the number of people involved, the forms of activities, and the output of the work the authors form in table 2. 
 Table 2 Form of Solid Waste Management on Merisik

 Process in Tapak Kuda Village

| Form of  | Description                 | Amount    | Outputs             |
|----------|-----------------------------|-----------|---------------------|
| Work     | of Activities               | involved  | of Work             |
|          |                             |           | Results             |
| Bertanda | It is an effort             | 4 Peoples | Each                |
| ng       | to invite                   |           | communi             |
| Dendang  | neighbors to                |           | ty                  |
|          | collect                     |           | member              |
|          | garbage from                |           | collects            |
|          | a wheelbarrow               |           | each                |
|          | that has been               |           | other's             |
|          | used for                    |           | house               |
|          | generations<br>made of wood |           | waste<br>that has   |
|          | and has a                   |           | been                |
|          | client to call              |           |                     |
|          | the residents               |           | wrapped<br>in dried |
|          | to collect solid            |           | coconut             |
|          | waste from the              |           | leaves              |
|          | garden,                     |           | that have           |
|          | household                   |           | been                |
|          | waste, and                  |           | shaped              |
|          | second-hand                 |           | like a              |
|          | waste with the              |           | package.            |
|          | inside of a                 |           | r                   |
|          | separate cart               |           |                     |
|          | for each                    |           |                     |
|          | allotment                   |           |                     |
| Menaruk  | It is a form of             | 4 Peoples | Landfill            |
| Pasang   | work to divide              | _         | and sort            |
|          | the trash in the            |           | out for             |
|          | ditch pit that              |           | inclusion           |
|          | has been                    |           | in dug              |
|          | provided to                 |           | trenches            |
|          | heap organic                |           | located             |
|          | waste (leaves)              |           | far from            |
|          | and trash that              |           | the coast           |
|          | can be                      |           | and                 |
|          | destroyed if it             |           | waters.             |
|          | is placed on                |           |                     |
|          | the ground                  |           |                     |
|          | because of the              |           |                     |
| L atc1r  | decay                       | 9 noor1   | It in               |
| Letak    | The process of              | 8 peoples | It is a<br>form of  |
| Hanyut   | burning plastic             |           |                     |
|          | or paper waste<br>by using  |           | burning<br>garbage  |
|          | by using<br>firewood        |           | with                |
|          | without                     |           | with<br>wood as     |
|          | kerosene, so                |           | the aim             |
|          | that the                    |           | of                  |
|          | combustion                  |           | reducing            |
|          | results can be              |           | landfill            |
|          | used to warm                |           | waste               |
|          | the cows of                 |           | and                 |
|          | cows,                       |           | warming             |
|          | chickens or                 |           | the cages           |
|          | poultry, ie                 |           | of                  |
|          | DOULUY, IE                  |           |                     |
|          | livestock                   |           | poultry             |

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|                       |   |   | residents  |  |
|-----------------------|---|---|--|--|
| Bersih<br>Diri        | It is after<br>doing mutual<br>assistance<br>activities in<br>the village<br>environment,<br>residents<br>conduct self-<br>cleaning<br>activities in<br>public  |   | A value<br>of<br>obedienc<br>e in clean<br>self when<br>worshipi<br>ng   |  |
| Makan<br>Berjump<br>a | public<br>It is a group<br>eating activity<br>carried out by<br>residents who<br>have been<br>tasked with<br>cleaning the<br>environment,<br>mothers<br>cooking, and<br>collecting<br>food at the<br>village hall to<br>take Friday<br>prayers for the<br>public to eat<br>together | Usually,<br>not all<br>residents<br>participat<br>e because<br>some go<br>to sea<br>and some<br>go to the<br>fields | Dividing<br>roles for<br>the<br>division<br>of waste<br>manage<br>ment in<br>the<br>followin<br>g week<br>besides<br>establishi<br>ng<br>friendshi<br>p<br>between<br>residents<br>and<br>communi<br>ty<br>gathering<br>activities |  |

For the form of solid waste management in the Tapak Kuda village community environment. In the process of applying values, norms and forms of action that exist in local wisdom there are many things that the writer catches about the contents of a process of cultural values in environmental management to maintain public health, such as in efforts to maintain the sustainability of harvests in the garden, where people who have Palm and oil palm fields will often go to the fields to clear the fields or harvest the coconut products to ensure insects and pests do not damage their fields.

In the activity of burning leaf litter, the community gained a local understanding, that with smoke can repel malaria mosquitoes because they live in coastal areas where malaria is endemic so that the way to burn leaf litter is a culture that is derived, while the appearance of the location of the village of Tread horse as a coastal village can be seen in Figure 2



Figure 2 Location of Tapak Kuda Village

Regarding the location of Tapak Kuda Village, then, to protect livestock from being attacked by epidemics, the community tried to build a fireplace from the results of leaves or paper, plastics and dried wood from unproductive trees, this effort was carried out so that the endemic mosquitoes would not reach the village. The form of local wisdom of the people of Desa Tapak Kuda in managing solid waste is as in table 3.

 Table 3 Forms of Local Wisdom of Tapak Kuda

 Villagers in Solid Waste Management

| Product | Types of Local Wisdom                                    |
|---------|--|
| Idea    | 1. Not allowed to dispose of garbage in mangrove forests |
|         | and water areas.   |
|         | 2. It is not allowed to dispose                          |
|         | of leftover food and                                     |
|         | medicines carelessly.                                    |
|         | 3. It is not allowed to dispose                          |
|         | of used cans and sanitary towels.                        |
|         | 4. Planting vegetables in the                            |
|         | yard.  |
|         | 5. Use banana leaves and dried                           |
|         | coconut leaves as a food                                 |
|         | wrapper or food serving area.                            |
| Values  | 1. Cleaning the house yard                               |
|         | from the unused property                                 |
|         | and making the house                                     |
|         | illuminated by the sun is a way to reduce the risk of    |
|         | malaria mosquitoes.                                      |
|         | 2. Using leaves in food                                  |
|         | wrapping and delivery is a                               |
|         | way of hereditary reducing                               |
|         | the use of plastic waste, so                             |
|         | carrying knitted baskets from                            |
|         | woven coconut leaves is                                  |

|      | characteristic of villagers.      |
|------|-----------------------------------|
|      | 3. Sorting out types of goods     |
|      | and rubbish from the house        |
|      | is the same as helping a busy     |
|      | worker who is in charge of        |
|      | cleaning rubbish and lighten      |
|      | your village's work.              |
|      | 4. Not getting used to buying     |
|      | food outside the village is       |
|      | the same as supporting the        |
|      | local economy and                 |
|      | maintaining environmental         |
|      | cleanliness with no               |
|      | haphazard snacks.                 |
|      | 5. Not allowed to bathe on the    |
|      | beach with detergent and          |
|      | soap because it will kill         |
|      | habitat and damage the            |
|      | ecosystem of the                  |
|      | environment.                      |
|      | 6. Joining a meal together after  |
|      | the disturbing activity is a      |
|      | form of village togetherness      |
|      | 7. Not make a fireplace at night  |
|      | above eight without guard         |
|      | because it can endanger the       |
| Norm | If they do not participate in the |
|      | process of managing solid waste   |
|      | in the village environment for a  |
|      | month, then they must pay a rice  |
|      | fine to the village office as a   |
|      |                                   |

Which describes how a cultural system works on environmental management and ensures security, health, and togetherness aspects as a community formed from generation to generation. The type of solid waste in the amount/kg produced in the village of Tapak Kuda per day the authors describe in table 4. as an overview of the analysis of the results of the pile of garbage generated at the village scale.

**Table 4.** The Analysis's Result of Waste Dump in<br/>the Village Scale of Tapak Kuda Village

| Village /     | Total      | Waste  | Waste  |
|---------------|------------|--------|--------|
| Environment   | population | Weight | volume |
| Environment 1 | 315        | 0,27   | 0,0029 |
| Environment 2 | 521        | 0,34   | 0,0032 |
| Environment 3 | 413        | 0,31   | 0,0030 |
| Environment 4 | 417        | 0,26   | 0,0018 |

The condition is a description of the contribution to each living environment, to describe the results of the detailed composition of the types of solid waste managed by the community, the authors set out in table 5.

 
 Table 5. Analysis of Solid Waste Composition Results on Tapak Kuda Village Scale

| Village       | Waste Characteristics  |  |  |  |
|---------------|--|--|--|--|
| Environment 1 | <ul> <li>□ Organic waste : 73%</li> <li>□ Inorganic Waste : 27%</li> </ul> |  |  |  |
|               | e  |  |  |  |
| Environment 2 | Organic waste : 75%  |  |  |  |
|               | Inorganic Waste : 25%  |  |  |  |
| Environment 3 | □ Organic waste : 54%  |  |  |  |
|               | □ Inorganic Waste : 67%  |  |  |  |
| Environment 4 | □ Organic waste : 58%  |  |  |  |
|               | □ Inorganic Waste : 42%  |  |  |  |

From the results of research, organic waste is the most type of waste produced by the community. Based on the data in Table 5. Regarding the composition of solid waste in Tapak Kuda Village, information can be obtained that the highest contribution of solid waste in the environment 2 this condition is also influenced by the population, from the results of research data in this village, the conditions illustrate that when many residents also contribute to the amount of weight of waste produced. In community involvement in the management of solid waste the percentage value of influence results is very good, meaning that with a percentage of 75.46% as in table 6.

Table 6.Level of Community Participation in<br/>Solid Waste Management in Tapak<br/>Kuda Village.

| Variable dan<br>Indicator  | Ofte<br>n        | Sarel<br>v       | Neve<br>r      | Tot<br>al      |
|--|------------------|------------------|----------------|----------------|
| Community<br>Participation in<br>Solid Waste<br>Management<br>Planning                                       |                  |                  | -              |                |
| 1. Involvement<br>in planning<br>solid waste<br>management<br>initiated by<br>village<br>stakeholders        | 47<br>78,3<br>%  | 10<br>16,66<br>% | 3<br>5%        | 60<br>100<br>% |
| 2. Involvement<br>in activities<br>of socializing<br>solid waste<br>management<br>by village<br>stakeholders | 53<br>88,3<br>3% | 5<br>8,3%        | 2<br>3,33<br>% | 60<br>100<br>% |

| r  | 1         |       |       | 1   |
|--|-----------|-------|-------|-----|
| 3. Involvement   | 40        | 10    | 10    | 60  |
| in the   | 66,6      | 16,67 | 16,67 | 100 |
| selection of   | 6%        | %     | %     | %   |
| the final  |           |       |       |     |
| waste  |           |       |       |     |
| collection   |           |       |       |     |
|  |           |       |       |     |
| point location   |           |       |       |     |
| in solid waste   |           |       |       |     |
| management   |           |       |       |     |
| in Tapak   |           |       |       |     |
| Kuda Village   |           |       |       |     |
| 4. Involvement   | 42        | 12    | 6     | 60  |
| in   | 70%       | 20%   | 10%   | 100 |
| determining  |           |       |       | %   |
| territorial  |           |       |       |     |
| boundaries   |           |       |       |     |
| for solid  |           |       |       |     |
|  |           |       |       |     |
| waste  |           |       |       |     |
| collection   | 1.5       | 0.5-  |       |     |
| Average  | 45,6      | 9,25  | 5,25  | 60  |
| Answer   | 75,8      | 15,41 | 8,75  | 100 |
|  | %         | %     | %     | %   |
| Community  |           |       |       |     |
| Participation  |           |       |       |     |
| in the   |           |       |       |     |
| implementati   |           |       |       |     |
| on of Solid  |           |       |       |     |
| Waste  |           |       |       |     |
| Management   |           |       |       |     |
| 1. Involve   | 42        | 10    | 8     | 60  |
| ment in making   | 66,6      | -     | -     | 100 |
| village  | 6%        |       |       | %   |
| regulations  | 070       |       |       | 70  |
| regarding solid  |           |       |       |     |
| 0 0  |           |       |       |     |
| waste  |           |       |       |     |
| management   |           |       |       |     |
| 2. Involve   | 50        | 7     | 3     | 60  |
| ment in  | 83,3      |       |       | 100 |
| installing   | %         |       |       | %   |
| environmentall   | ,0        |       |       | 70  |
| y friendly   |           |       |       |     |
| boundary   |           |       |       |     |
| markers in   |           |       |       |     |
|  |           |       |       |     |
| Tapak Kuda   |           |       |       |     |
| Village  |           |       | 10    |     |
| 3. Involve   | 39        | 11    | 10    | 60  |
| ment in  | 65%       |       |       | 100 |
| training   |           |       |       | %   |
| activities in  |           |       |       |     |
| processing and   |           |       |       |     |
| managing solid   |           |       |       |     |
| waste carried  |           |       |       |     |
| out by village   |           |       |       |     |
|  |           |       |       |     |
| officials /  |           |       |       |     |
| officials /  |           |       |       | 1   |
| traditional  |           |       |       |     |
| traditional equipment  | ~ .       |       | 2     |     |
| traditional<br>equipment<br>4. Involve                                       | 54        | 4     | 2     | 60  |
| traditional equipment  | 54<br>90% | 4     | 2     | 100 |
| traditional<br>equipment<br>4. Involve<br>ment in the<br>area                |           | 4     | 2     |     |
| traditional<br>equipment<br>4. Involve<br>ment in the<br>area<br>maintenance |           | 4     | 2     | 100 |
| traditional<br>equipment<br>4. Involve<br>ment in the<br>area                |           | 4     | 2     | 100 |

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| the<br>accumulation<br>of solid waste<br>in the village<br>environment<br><b>Average</b><br><b>answer</b> | 41,7<br>5<br>77.0<br>8% | 32<br>53,3<br>%    | 5,75<br>9,58<br>%  | 60<br>100<br>% |
|---|-------------------------|--------------------|--------------------|----------------|
| Community<br>Participation<br>in Monitoring<br>and<br>Evaluating<br>Solid Waste<br>Management             |                         |                    |                    |                |
| 1. Involve<br>ment in village<br>hygiene and<br>security<br>supervision<br>activities                     | 52<br>86,6<br>%         | 6<br>10%           | 2<br>3,33<br>%     | 60<br>100<br>% |
| 2. Involve<br>ment in<br>evaluating<br>solid waste<br>management in<br>the village                        | 45<br>75%               | 5<br>8,3%          | 10<br>16,67<br>%   | 60<br>100<br>% |
| Average<br>Answer   | 48,5<br>80,8<br>3%      | 5,5<br>9,1%        | 6<br>10%           | 60<br>100<br>% |
| TotalofCommunityParticipationLevel in SolidWasteManagement  | 45,2<br>8<br>75,4<br>6% | 15,5<br>25,97<br>% | 5,6<br>9,44,<br>6% |                |

Community involvement in solid waste management shows the conditions in which Tapak Kuda village people have environmental awareness and awareness in maintaining environmental health through good environmental management, one of which is by managing solid waste. Forms of community involvement include the planning, implementation, and evaluation stages of receptive activities.

#### Discussion

Based on the results of the study obtained identification of local wisdom in solid waste management in Tapak Kuda Village, Tanjung Pura as a recompense activity. Based on the results of in-depth interviews with 2 traditional leaders and 3 environmental leaders, it was found out that this culture has been carried out for more than 50 years, the form of activities has indeed been adapted to change activities, historically this receptive activity was once carried out to overcome epidemics such

as malaria and also pest attacks in the community field, in a situation the phenomenon of local knowledge becomes the basis in the formation of a community attitude in an area. This is influenced by the characteristics of the region, the number of posts, the length of stay and the forms of belief that are believed, for example, the people in Tahurai Bali have local wisdom in mangrove forest management, where the principle of cutting one tree and planting five trees is part of how to continue the life cycle of mangroves ( Lugina, Alvviya, & Indirartik, 2017;14(1)). In India, there is a village called Piplantri, in Rajashthan also famous for a local culture where if a woman gives birth to a girl then it is obliged to plant 111 trees as a form of survival, this is believed by the community because of the arid region and difficult water makes trees As a large reserve for water supply, this illustrates events that local understanding of culture contributes to the defense of an area (Joshi & Ahmed, 2016;2(1)).

The custom of Tapak Kuda Village community to dispel failed harvests in cucumber and pumpkin vegetable gardens makes the rituals disturbing as a joint activity to burn trash to clean the environment from invisible pests or unseen conditions that the community believes are inhibiting harvest failure and disease outbreaks. In narrating the information it is also explained that public awareness of the existence of waste is contrary to religion or religion, that religion teaches cleanliness and health, with a clean environment so the mosque or place of worship makes the community devoted to worship. A trompak sungkem tradition which is carried out in Magelang where the community comes to the river or spring to do a big shower as a welcoming ceremony for the holy month of Ramadan, the community considers bathing in the river as a form of activity where the water by taking clean water coming from the same spring by taking the value of goodness to practice good worship (Oktafia & Wahyu, 2018;1). The trust of Tapak Kuda Village people who judge by keeping their cleanliness especially from solid waste have taken care of their health, through a healthy village community condition, the economic rotation of fishing activities such as fishermen and crab seekers in mangrove forests can continue. There is an idea about the relationship between the environmental health conditions of the waters and the level of craft of fishermen in fishing, explained that healthy people can go to the sea or hang fish, shrimp and squid, if the community is sick the economic conditions will not work, so the village will no longer produce products that can be sold to markets.

The source of life is water so that prohibition for fishermen or residents to bathe in the sea or wash in the estuary with soap is not obtained, this term is known as abstinence which is an action that is not permitted and prohibited because it can cause distress for all people in the village, this concept is a translation of the conservation value carried out by the community not to pollute seawater and estuary, because they make a living from marine products, besides that awareness of skin diseases such as ringworm and phlegm caused by dirty water conditions and humid environment is very much avoided residents, after being traced that villagers did not like seeing a doctor, but more often used natural medicine and went to the adat head. This is the reason that when the environment is polluted, people no longer get natural medicines in the form of plants because the environment is damaged by being polluted by garbage or other chemicals (Jumiarni & Komalasar, 2017;22(1)). The form of the idea of environmental conservation is done by not polluting the environment from the results of solid domestic waste in the form of cans, glass, and plastic washing soap or food packaging, a situation where maintaining cleanliness before conducting worship is a value held firmly as part of the identity of indigenous peoples, not generated throwing out garbage and bathing in the sea or being bathed with soap or being detained as a manifestation of social norms about protecting water quality and sustainability earning a living for the people's economic circulation.

Regarding the composition of the solid waste in Tapak Kuda Village, the data in Table 5. Explains that the composition of waste in the curvature is organic and non-organic solid waste, from 3 environments in the footprint village, showing the results that organic waste is the majority generated in This village, this is a picture that the community produces more waste from nature or something that can be decomposed quickly if stacked, from the results of interviews to village officials, the amount of waste is not much for non-organic waste because it is often wasted only paper, newspapers used, broken plates and used sacks from transporting cucumbers or pumpkins from the fields, while organic waste is banana leaves and grass waste produced from the yard, as for woven wood that has not been used as a place to dry salted fish, dried squid or reborn shrimp and the anchovies are only rare because

sometimes the sun boards are reused with re-dyed or damaged and discarded, this condition illustrates that the use of the recycling cycle principle has been applied by villagers that is by reusing goods that can still be used. Recycling is an approach to managing solid waste that is environmentally friendly and increases the economic level of the community if done with creativity, used cans and patchwork turned into flower pots and tablecloths are part of the community's small business units around the wall paint factory and businesses garment (A, M, & D,C,R, 2017;122). Local economic development can be encouraged by training, building village cooperatives, and forms of business assistance in encouraging village-scale economic rotation. Tread Horse Village is also a village producing natural preservation foods such as salted fish and shrimp paste products. However, the community also has an awareness not to use chemicals in terms of preservation, based on the information and lab tests on the types of shrimp paste and salted fish produced from Tapak Kuda Village, there are no chemical additions except natural preservatives in the form of salt (Sihombing & Silalahi, 2018;3(2)). shows that people have an awareness of the importance of food consumption from natural ingredients. In terms of knowledge, the community does not know the long impact of chemicals on food but the belief of the village community through the value of local knowledge perceives that consuming natural foods is the same as prolonging life (Sihombing & Silalahi, 2018;3(2)).

The results of community participation measurement in the involvement of solid waste management show a very high result of 75% where this result is interpreted as a condition where the community often follows all solid waste management activities in the village environment, some residents have not participated in the information that sometimes there are also citizens who are still at sea and haven't returned to the land yet. The phenomenon of women's involvement in solid waste management in Tapak Kuda Village also illustrates that gender conditions are still attached to caring for something, from the results of table 1. The number of women involved in management activities is 40 people, in carrying out cleaning activities women take a large role in this village, men play a role in efforts to earn a living in the sea in search of fish. Coastal communities have the perspective that fishing works only for men. while women are tasked with taking care of the fields and homes, this condition illustrates the division of gender roles in carrying out activities in

the social life of the community. Other research in Batu related to the role of women in environmental management also resulted in the finding that women as objects in implementing cleanliness and functions became (Uci, stylist important 2019;2(1)). The level of community participation is also determined by influencing factors such as the level of education, gender, age, income level, and length of stay in an area also becomes a determinant in a form of community involvement in the solid waste management process (Zakianis, Koesoemawardani, & Fauzia, 2018;2(2)). If you look at Table 1. That the level of education of people who graduated from high school is only 28 out of 60, it means that in general, the community is not all high school graduates. This becomes a picture that participation is related to the level of education but does not always indicate that the high level of education is in line with participation. this has a value of identity and social norms if it is not implemented so that the community is willing to participate in carrying out their duties every week in the form of receptive traditional activities, that is Meresik.

Coastal communities in Tapak Kuda Village, Tanjung Pura, make local wisdom meresik as a local identity where every member of the community understands and applies these values as a form of unwritten but organized agreement, customary institutional forms such as Tengku or elders deliver a lot of information and advice about maintaining health the community through a clean environment. and well-maintained village institutions have not written down in a stipulation that the reception is a village policy, but the organizing is done formally and voluntarily in which village administrators as managers of activities and village communities as members of activities. forms of activities carried out continuously, no Special funds are all budgeted to be carried out with voluntary homelessness and cooperation principles in the village. Sustainability of an area is also determined by the role of community members, the failure of a policy is not always related to the form of policy made by the government but rather a form of cooperative interaction between policymakers and implementers that do not run harmoniously. Identification of the forms of community participation in solid waste management in the coastal community of Tapak Kuda Village was identified as a form of self-help mobilization were with local wisdom the community made a local initiative based on community ideas, driven by the community, carried out by the community and

evaluated with the community itself without direction and the role of external parties, this condition is the case with the forms of participation and self-help principles carried out by the community in Bungo District in Jambi in the Pamsimas program 3, in this activity, the community collectively has an awareness of the importance of a role, the community divides activities with available resources and refers to the purpose of the activity, although the form of the program cannot be equated in local wisdom which is natural, identification of the form of participation in the same (Asmnar, 2019;3(1)).

In the form of local meresik, one of the positions is called placing pegs where the activity is a waste segregation process. In the process of management, the community in charge also pays attention to the dug pit / ditch that has been dug, the condition of the trench is given a safety boundary and certainly not close to the settlement, so that the combustion results do not endanger the safety conditions of the population, the results of the combustion will be collected again and distributed to residents who want to take as a result of the burnt land that will be used as fertilizer for crops in the fields, this condition is intended again that the fertilizer used for plants also does not contain chemicals synthesis that has a negative impact on the state of the environment, the community has the perception that by using uncontaminated ground water and the community will not be affected by the disease, the realization of sanitation awareness in this village is also sufficient to be carried out with a systematic scheme, where coastal areas always have difficulties in getting access to clean water, but to ensure the availability of water supply, the village has a large reservoir to store water and tightly closed, residents are not allowed to use sea water or estuary water because it is considered to be able to pollute and interfere with health, according to tengku or the traditional leader is done as an effort to save the sea from forms of exploitation and pollution. Solid waste management in coastal communities is not just the role of the government, but the role of the community, the private sector of each element of the region in the process of involving each element of an area can be done with the concept of co-management, where each party takes a role in environmental management. The cultural approach is receptive as part of self-help by local communities armed with local knowledge.

### CONCLUSIONS

From the results of this study, it can be concluded that meresik as the local wisdom on coastal communities in Tapak Kuda Village, Tanjung Pura is a local identity in the application of ideas, values, and norms about environmental health and cleanliness, awareness in managing waste is a manifestation of a sanitary perspective through a religious perspective and culture. The level of community participation is very good, this is due to the firm values and habits that have been passed down from generation to generation, the results obtained from this study can be used in efforts to manage solid waste at a village scale, efforts to manage solid waste can be applied through a cultural approach on aspects of ideas, values, norms. The aspect of awareness can be encouraged by the knowledge of the impact of waste on environmental sustainability and the level of public health seen from the perspective of sanitation and the danger of pollution if it occurs in the watershed area.

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