Implementation of Zoning Plan Policy in Coastal Areas and Small Islands

(Case Study of Seaweed Farmer Groups In Uiboa Village, South Semau Sub-District, Kupang District, East Nusa Tenggara Province)

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ABSTRACT: This research aims to analyze the Implementation of Zoning Plan Policy for Coastal Areas and Small Islands with a case study of “Penabur Kasih” Farmers Group in South Semau Sub-District, Kupang District based on East Nusa Tenggara Provincial Regulation No. 4 year 2017 concerning Zoning Plans for Coastal Areas and Small Island period of 2017–2037. The method used in this research is Qualitative Analysis using the Van Meter and Van Horn Model. The results of the research show that zoning plans for coastal areas and small islands in Kupang Regency have not been optimal. The causative factors are the absence of the Kupang Regency Regional Regulation derived from the East Nusa Tenggara Provincial Regulation No. 4 year 2017, and land ownership in coastal areas which are still controlled by Landlords. From the results of this research, it is recommended for coordination between the Maritime and Fisheries Department of the East Nusa Tenggara Province and the Marine and Fisheries Department of Kupang District as a derivative of the Provincial Regulation No. 4 year 2017, and coordination between the East Nusa Tenggara Province Marine and Fisheries Department and landlords regarding authoritative right to manage the sea area.

KEYWORDS: Implementation, Zoning Plan Policy, Farmer Group Empowerment

I. INTRODUCTION

Background

Indonesia is an archipelago which 2/3 of its area is of ocean. According to data from the Navy's Hydro-Oceanographic Center (Pusdikhidrosal), Indonesia comprise of 17,500 islands, both small and large (https://www.liputan6.com/regional/read/2994344/jumlah-terbaru-pulau-milik-indonesia-versi-pushidrosal surveys). Among the thousands of islands in Indonesia, there are both inhabited and uninhabited ones, where at present, the zoning of these islands has not been fully implemented. Indonesia through Law Number 23 of 2004 concerning Regional Government states that 1/3 of the 12 miles of sea area are managed by the province. However, overlapping of utilization of coastal areas and small islands is still acknowledged by the community. Law Number 1 year 2014 as an amendment of Law Number 27 year 2007 concerning Management of Coastal Areas and Small Islands, mentions that the zoning plan is one that determines the direction of the use of resources and determination of space structures and patterns in planning areas that contain activities that may be carried out and may not be carried out, and furthermore, activities that can only be carried out by permission. The zoning plan for coastal areas and small islands in Kupang District, East Nusa Tenggara Province is based on the East Nusa Tenggara Provincial Regulation Number 4 year 2017 concerning Zoning Plans for Coastal Areas and Small Islands for 2017-2037 period. Zoning Plans for Coastal Areas and Small Islands is directed at the management of coastal areas and small islands in a plan for coordination, utilization, supervision and control of resources carried out by the provincial government, between related sectors, between land and sea ecosystems, and between science and management to improve people's welfare. In this case zoning is a spatial planning instrument which will be the basis for granting permission to use space in coastal waters as being a control tool for balancing utilization, protection, preservation, and welfare of the community as well as providing legal certainty and protection in the utilization of coastal waters.

Kupang District possess high potential of marine resources in terms of seaweed. In the region, there are groups of seaweed farmers that cultivate seaweed by utilizing coastal areas. The problem lies on whether the
coastal area used by farmer groups for seaweed cultivation is in accordance with the zoning policies or not. Accordingly, a problem arises concerning legality of the usage of coastal areas for seaweed cultivation based on the zoning policies.

Problem Formulation
Based on the background above, problems in this research can be formulated as follows:

a. How is the implementation of the Zoning Plan Policy for Coastal Areas and Small Islands in Kupang District, East Nusa Tenggara Province?
b. What factors support and hinder the implementation of the Zoning Plan Policy for Coastal Areas and Small Islands policy in Kupang District, East Nusa Tenggara Province?

Research Purpose
The purpose of this research is as follows:

a. To analyze the implementation of Zoning Plan Policy for Coastal Areas and Small Islands in Kupang District, East Nusa Tenggara Province.
b. To analyze what factors support and inhibit the implementation of the Zoning Plan Policy for Coastal Areas and Small Islands policy in Kupang District, East Nusa Tenggara Province.

Theoretical basis
Public Policy. Anderson in Islamy (2009) asserts that the policy is “a purposive course of action followed by an actor or set of actors in dealing with a problem or matter of concern”. The form of deep public policy in Nugroho (2006) consists of formal and legal codified legislation from the central level as well as from sub-district or village level, for example in article 7 of Law Number 10 year 2004 concerning the Establishment of Legislation that mentions the statutory order, namely:

a. State Law of the Republic of Indonesia of 1945
b. Regulation in lieu of law
c. Government regulations
d. Presidential decree
e. Local regulation

Policy Implementation. Webster's dictionary defines “to implement” as a channel to provide the means for carrying out, to give practical effect to. This understanding means that to implement something entails employing supporting facilities that will later have an impact or effect on that something (Abdul Wahab, 1997). The success of implementation is greatly influenced by a deep understanding of how these various elements can work together harmoniously, indicated by interaction between actors, capacity of field actors, strategy of information-sharing or socialization, and organizational capacity (Purwanto E.A & Sulistyastuti D.R, 2012).

II. METHOD

This research uses qualitative analysis method on a case study. Case studies are detailed tests of one setting or one subject person or one document store or one particular event (Bogdan and Biklen, 1982). Case studies focusing on an intensive case include:

a. The research objectives, which can be in the form of humans, events, settings, and documents
b. In-depth examination of the objectives as a totality in accordance with each background or context in aim to understand the various links that exist between the variables.

Research Focus
This research focuses on the implementation of policy theory model presented by Van Meter and Van Horn, which comprise of 6 variables as follows:

a. Standards and targets of policies
This variable is used to measure the performance of the policy implementation which is derived from the vision, mission, goals and objectives. The indicators of performance measurement are:
1) The existence of standard objectives applied in the empowerment activities of the “Penabur Kasih” seaweed farmer group.
2) The existence of vision, mission and objectives of the “Penabur Kasih” Seaweed Farmer Group.
3) Inexistence of other activities in the area.
b. Resource
Includes human, budget, infrastructure and management that enable the implementation of policies. Resources are measured through the indicators of:
1) Availability of human resources both in terms of quality and quantity
2) Efforts to increase the quantity and quality of human resources
3) Availability of budget for community empowerment activities.
4) Aid funds and donors who are not bound.
5) Availability of facilities and infrastructure in seaweed cultivation activities.

c. Characteristics of the implementing organizations
This variable measures performance of policy implementation by identifying how many organizations and bureaucracies are involved in policy implementation. Indicators used are:
1) Adjusted competency in the empowerment of seaweed farmers
2) The existence of a bureaucratic structure in managing the farmers to comply to zoning regulations.
3) The existence of a Standard Operating Procedure in seaweed cultivation.

d. Tendencies/attitude of the implementers
This variable measures the performance of policy implementation by identifying commitments, policies and intensity of implementers in accepting or rejecting public policies. Executors might influence and even alter policies according to their interests which will deviate from the set policies. The indicators will either be acceptance, neutrality, or rejection towards the policies.

e. Communication between relevant organizations and implementation activities
This variable aims to identify communication clarity and intensity of collaboration between organizations. Better communication guarantees for smaller errors. Consistency of policy implementation can be communicated between the related organizations. Indicators used are:
1) Clarity of communication and consistency between organizations
2) Good coordination between the organizations.

f. Economic, social, and political conditions
This variable identifies the extent to which economic, social and political conditions contribute to the success of the policies implementation. Indicators used are:
1) Community participation
2) Elements of society support or rejection
3) The nature of public opinion or response
4) Increase in people's income
5) Job creation/new business activities.

Data Collection Technique
Data collection technique is strategic to a research as the main purpose of a research is to obtain data (Sugiyono, 2013). Data collection in this research is carried out by:
1. Observation, which aims to understand activities that take place, explain who is involved in an activity, understand the meaning of an event and describe the settings that occur in an activity (Michael Quinn Patton).
2. Interview. The interview involves two parties, namely the interviewer (one who asks the question) and interviewee (one who gives answer to the question) (Lexy J. Moleong, 1991).
3. Documentation, which is the activity in the form of collecting, processing, storing, rediscovering and distributing documents (Paul Otlet, 1905).

Data Analysis Technique
Miles and Huberman in Sugiyono (2014) suggest that data analysis is carried out interactively and continuously within the stages of:
1. Data reduction. This stage summarizes the main and important ideas, and identifies for themes and patterns.
2. Data display, which can take form of brief descriptions, charts, relationships between categories, flowcharts and so on.
3. Conclusion drawing/verification. This stage comprise of data analysis which is carried out at the beginning up to the end of data collection.
Data Validity
The validity of data obtained in the field was tested using triangulation technique. Triangulation is a technique of checking the validity of data that uses something else outside the data for checking or comparing data. (Lexy J. Moleong, 2014)

III. RESULTS

Kupang District Overview
Kupang District Medium-Term Development Plan for 2014-2034 identifies its area to be of 506,626.68 Ha. The majority of its area is of forests which accounts for 24.93%. Land use in Kupang District according to the Regional Spatial Plan is displayed in Table 1.

Table no 1: Land Use in Kupang District

<table>
<thead>
<tr>
<th>NO</th>
<th>TYPES OF USE</th>
<th>LAND WIDTH (HA)</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Protected Forest</td>
<td>126,318.00</td>
<td>24.93</td>
</tr>
<tr>
<td>2</td>
<td>Productive Forest</td>
<td>162,892.09</td>
<td>32.15</td>
</tr>
<tr>
<td>3</td>
<td>Wildlife Sanctuary</td>
<td>3,449.50</td>
<td>0.68</td>
</tr>
<tr>
<td>4</td>
<td>Tourist Parks</td>
<td>783.00</td>
<td>0.15</td>
</tr>
<tr>
<td>5</td>
<td>Mangrove Forest</td>
<td>4,127.99</td>
<td>0.81</td>
</tr>
<tr>
<td>6</td>
<td>Agriculture Irrigation</td>
<td>4,856.76</td>
<td>0.96</td>
</tr>
<tr>
<td>7</td>
<td>Fields</td>
<td>35,898.72</td>
<td>7.09</td>
</tr>
<tr>
<td>8</td>
<td>Plantation</td>
<td>39,731.45</td>
<td>7.84</td>
</tr>
<tr>
<td>9</td>
<td>Lake</td>
<td>616.89</td>
<td>0.12</td>
</tr>
<tr>
<td>10</td>
<td>Settlements</td>
<td>15,938.86</td>
<td>3.15</td>
</tr>
<tr>
<td>11</td>
<td>Aquaculture / Seaweed cultivation</td>
<td>616.93</td>
<td>0.12</td>
</tr>
<tr>
<td>12</td>
<td>Open Land</td>
<td>38,942.14</td>
<td>7.69</td>
</tr>
<tr>
<td>13</td>
<td>Thicket Shrubs</td>
<td>72,459.35</td>
<td>14.30</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>506,626.68</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Kupang District Medium-Term Development Plan for 2014-2034

As seen in Table 1, aquaculture/seaweed cultivation accounts for 0.12% of the total usage of land in Kupang District.

Table no 2: Data of Seaweed Cultivation in Kupang District

<table>
<thead>
<tr>
<th>NO</th>
<th>SUB-DISTRICT</th>
<th>LAND AREA (HA)</th>
<th>PRODUCTION (TONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Semau</td>
<td>423</td>
<td>611,782</td>
</tr>
<tr>
<td>2</td>
<td>South Semau</td>
<td>415</td>
<td>402,660</td>
</tr>
<tr>
<td>3</td>
<td>West Kupang</td>
<td>374</td>
<td>216,532</td>
</tr>
<tr>
<td>4</td>
<td>Sulamu</td>
<td>43</td>
<td>111,608</td>
</tr>
</tbody>
</table>

Source: Marine and Fisheries Department of Kupang District, 2017

Kupang District lies between 0 - 500 meters above sea level, with details as follows:
- 0 – 50 meters = 47,144 Ha (7.44%)
- 50 – 100 meters = 112,126 Ha (17.69%)
- 100 – 150 meters = 98,133 Ha (15.48%)
- 150 – 500 meters = 301,960 Ha (47.64%)
- > 500 meters = 74,509 Ha (11.75%)

Geographically
Kupang District is located between 123016’10.66”EL - 124013’42.15”EL-9015’11.78”SL - -10022 14.25”SL. Sea area is of 3,728.25 Km2 with a coastline length of 442.52 Km. Kupang District boarders are as follows:
- The South boarder the Indian Ocean and the Timor Sea
- The East boarder is Belu and Central Timor Districts
- The North boarder is South Timor Tengah District and Ambeno (Timor Leste)
- The West boarder is Kupang City and Rote Ndao District.
General description of South Semau Sub-District

In accordance with Kupang District Regional Regulation Number 22 year 2005 concerning Regional Expansion, Semau Sub-district is divided into two regions, namely Semau Sub-district and South Semau Sub-district. South Semau Sub-District comprise of six villages with a total area of ± 189.17 Kms, inhabited by a population of 5,393 people consisting of 2,690 males and 2,703 females, with a total of 1,418 patriarchs.

Table no 3: Population of South Semau Sub-District

<table>
<thead>
<tr>
<th>NO</th>
<th>VILLAGE</th>
<th>PATRIARCHS</th>
<th>MALE</th>
<th>FEMALE</th>
<th>TOTAL</th>
<th>AREA (KMS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Akle</td>
<td>269</td>
<td>508</td>
<td>559</td>
<td>1,067</td>
<td>32.21</td>
</tr>
<tr>
<td>2</td>
<td>Uitiuhana</td>
<td>439</td>
<td>764</td>
<td>691</td>
<td>1,455</td>
<td>52.26</td>
</tr>
<tr>
<td>3</td>
<td>Uiboa</td>
<td>216</td>
<td>434</td>
<td>454</td>
<td>888</td>
<td>31.35</td>
</tr>
<tr>
<td>4</td>
<td>Naikean</td>
<td>185</td>
<td>361</td>
<td>386</td>
<td>747</td>
<td>28.50</td>
</tr>
<tr>
<td>5</td>
<td>Uitiuhtuan</td>
<td>176</td>
<td>368</td>
<td>364</td>
<td>732</td>
<td>29.85</td>
</tr>
<tr>
<td>6</td>
<td>Onansila</td>
<td>132</td>
<td>255</td>
<td>249</td>
<td>504</td>
<td>15.00</td>
</tr>
<tr>
<td></td>
<td>Jumlah</td>
<td>1,418</td>
<td>2,690</td>
<td>2,703</td>
<td>5,393</td>
<td>189.17</td>
</tr>
</tbody>
</table>

Source: South Semau District Regional Government, 2018

Seaweed farmer groups in Semau and South Semau Sub-Districts that utilize the coastal areas are featured in Table 4.

Table no 4: Seaweed farmer groups in Semau and South Semau Sub-Districts

<table>
<thead>
<tr>
<th>NO</th>
<th>SUB-DISTRICT</th>
<th>VILLAGE</th>
<th>GROUP NAME</th>
<th>DIRECTOR</th>
<th>NUMBER OF MEMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>South Semau</td>
<td>Uiboa</td>
<td>Penabur Kasih</td>
<td>Michael Tihu</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>South Semau</td>
<td>Uitiuhana</td>
<td>Bukit Cerah Ingutomo</td>
<td>Yorim Aty</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>South Semau</td>
<td>Uiboa</td>
<td>Kodale</td>
<td>Kristofel Liku</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>South Semau</td>
<td>Akle</td>
<td>Harapan</td>
<td>Pace Kisek</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>South Semau</td>
<td>Uitiuhtuan</td>
<td>Senu Tassi</td>
<td>Yanto Soka</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>South Semau</td>
<td>Uitiuhtuan</td>
<td>Mada Fai</td>
<td>Yesriel Ranoh</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>South Semau</td>
<td>Akle</td>
<td>Getsemani</td>
<td>Arnold Daik</td>
<td>11</td>
</tr>
<tr>
<td>8</td>
<td>South Semau</td>
<td>Akle</td>
<td>Talenta</td>
<td>Arfet Poto</td>
<td>18</td>
</tr>
<tr>
<td>9</td>
<td>Semau</td>
<td>Uiasa</td>
<td>Harapan</td>
<td>Ferdinand Luit</td>
<td>12</td>
</tr>
<tr>
<td>10</td>
<td>Semau</td>
<td>Leibaun</td>
<td>Tia Tassi</td>
<td>Abraham B</td>
<td>13</td>
</tr>
<tr>
<td>11</td>
<td>Semau</td>
<td>Leibaun</td>
<td>Kindu Alam</td>
<td>Marthen K Nisono</td>
<td>14</td>
</tr>
<tr>
<td>12</td>
<td>Semau</td>
<td>Uiboa</td>
<td>Sepakat</td>
<td>Enos Killa</td>
<td>15</td>
</tr>
<tr>
<td>13</td>
<td>Semau</td>
<td>Batiunan</td>
<td>Kompleleo</td>
<td>Alfred R Bao</td>
<td>16</td>
</tr>
</tbody>
</table>

Source: Maritime and Fisheries Department of Kupang District, 2018

Geographically, South Semau boarders are as follows:
- The North boarder is Semau Sub-District
- The South boarder is Pukuafu Strait
- The East boarder is the Timor Sea
- The West boarder is Sabu Sea

General Description of Uiboa Village

Uiboa Village, which is the location of the research, comprise of 4 hamlets which are Uiboa, Uilamasi, Pahlelo, and Lungnian. The boarders to Uiboa Village are:
- The North boarder is Bokonusan Village of Semau Sub-District
- The South boarder is Akle Village, Naikean Village and Uitiuh Tuan Village in Semau Selatan Sub-District
- The East boarder is Onansila Village and Uitiuh Ana Village in South Semau Sub-District
- The West boarder is Sabu Sea

Uiboa Village lies 40m above sea level. The rainfall averages to 10mm with a duration of 4 months of rainy season, while daily temperature averages on 32⁰ C. The population of Uiboa Village is 1177 people which comprise of 207 patriarchs.
Land Ownership

In general, the lands in Uiboa Village including coastal areas are in command of the landowners. Groups of seaweed farmers who intend to cultivate seaweed would generally require permission from these landowners. Once granted permission, farmers could establish shelters on the coast to tie, harvest seaweed or shelter.

Marine and Fisheries Department of Kupang District

Based on Kupang District Regulations Number 47 year 2016 concerning Position, Organizational Structure, Tasks and Functions, and Work Procedures for Kupang District Offices, the Marine and Fisheries Department has the duties and functions of carrying out governance and possess regional autonomy authority in the field of maritime and fisheries

1. Vision and Mission
Vision: The realization of welfare of the people of Kupang District as an independent union and competitive through sustainable management of marine and fisheries resources. The missions are as follows:
   a. Develop productive businesses in the field of sustainable fisheries to increase family income.
   b. Optimizing the use of marine and fisheries resources
   c. Enhance competency of human resources to increase competitiveness in marine and fisheries resource management.
   d. Increasing the supervision and protection of marine and fishery resources to maintain the quality and ecosystem of the aquatic environment.

2. Human resources
The total number of personnel in the Marine and Fisheries Department of Kupang District in 2018 is 30 people, consisting of permanent and honorarium employees.

3. Assistance for seaweed cultivation facility
In empowering seaweed farmer groups, Marine and Fisheries Department of Kupang District provides facilities for cultivation as presented in Table 5.

<table>
<thead>
<tr>
<th>NO</th>
<th>ITEM</th>
<th>AMOUNT</th>
<th>UNIT</th>
<th>VOLUME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Main Rope of Poly Ethylene 12 mm</td>
<td>80</td>
<td>Kgs</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Anchor rope Poly Ethylene 12 mm</td>
<td>80</td>
<td>Kgs</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Main auxiliary rope Poly Ethylene 12 mm</td>
<td>50</td>
<td>Kgs</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Poly Ethylene 6 mm</td>
<td>115</td>
<td>Kgs</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Rafia rope</td>
<td>3</td>
<td>Rolls</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Anchor @ 20 Kg</td>
<td>5</td>
<td>Units</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Main Buoy diameter 36 Cm</td>
<td>6</td>
<td>Units</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Supporting Buoy Diameter 30 Cm</td>
<td>10</td>
<td>Units</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Plastic bottles</td>
<td>350</td>
<td>Units</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Fiberglass Boat (long 4 Ms, high 45 cms, wide 80 cms)</td>
<td>1</td>
<td>Unit</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Nets</td>
<td>2</td>
<td>Rolls</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Seaweed Seeds</td>
<td>300</td>
<td>Kgs</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Life jacket</td>
<td>2</td>
<td>Units</td>
<td></td>
</tr>
</tbody>
</table>

Source: Marine and Fisheries Department of Kupang District, 2017

4. Budget
The total amount of financial support towards the seaweed cultivation groups in 2017 was Rp. 10,786,606,620, - , which consists of :
   1) Indirect costs of Rp. 6,202,205,320, -
   2) Direct costs of Rp. 4,584,401,300, -

“Penabur Kasih” Farmers Group

As presented in Table 4, the “Penabur Kasih” Farmers Group consists of 30 members, lead by a group leader or director, Mr. Michael Tihu. The group establishment is authenticated by the Decree of Uiboa Village Chief Number 10 of 2016, dated January 18, 2016.

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1. Vision and Mission
The vision of “Penabur Kasih” is improving the welfare of seaweed farmers through enhancement of farmer resources and preserving the environment by complying to the zoning regulations.

The mission of the farmers group is listed as:

a. Enhance seaweed farmer resources.
b. Comply to the zoning of coastal areas.
c. Improve the quality and quantity of seaweed.
d. Open employment opportunities for the community
e. Enhance effectiveness of seaweed farming communities

2. Work Program
The work program of “Panabur Kasih” is as follows:

III. Initiate patrolling activities to control the area of seaweed cultivation
IV. Increase awareness of seaweed farmers to maintain regional zoning.
V. Comply to seaweed cultivation zones
VI. Providing awareness to group members of the responsibility to utilize seaweed farming facilities that have been provided by the Marine and Fisheries Department.

The “Penabur Kasih” Farmers Group has succeeded in cultivating seaweed. Beside to cultivate Sacol and Catoni seaweed, these farmer groups have also succeeded in cultivating seaweed through the plant tissue isolation method. Seaweed harvests are sold/shipped around the Semau and South Semau Sub-Districts as well as outside the region. Table 6 displays data of the seaweed harvest shipments.

<table>
<thead>
<tr>
<th>NO</th>
<th>DATE</th>
<th>DESTINATION</th>
<th>TOTAL (KGS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>27 September 2017</td>
<td>Rote Island (East Nusa Tenggara)</td>
<td>1,000</td>
</tr>
<tr>
<td>2</td>
<td>17 October 2017</td>
<td>Rote Island (East Nusa Tenggara)</td>
<td>700</td>
</tr>
<tr>
<td>3</td>
<td>7 December 2017</td>
<td>Huleot village, Semau Sub-district (East Nusa Tenggara)</td>
<td>1,000</td>
</tr>
<tr>
<td>4</td>
<td>9 December 2017</td>
<td>Akle Village, South Semau Sub-District (East Nusa Tenggara)</td>
<td>2,500</td>
</tr>
<tr>
<td>5</td>
<td>2 July 2018</td>
<td>Sabu Island and Sumba Sumba Island (East Nusa Tenggara)</td>
<td>1,650</td>
</tr>
<tr>
<td>6</td>
<td>12 July 2018</td>
<td>Universitas Kristen Artha Wacana Kupang</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Seaweed Farmers Group Director, 2018

IV. DISCUSSION
The implementation of zoning plan policy for coastal areas and small islands in Kupang District, East Nusa Tenggara Province is analyzed using the Van Meter and Van Horn Models.

1. Standards and targets of policies
East Nusa Tenggara Province Regional Regulation Number 4 year 2017 concerning zoning plan for coastal areas and small islands serves as a basis for determining the allocation, usage, and regulation regarding space in small islands. To realize this goal, policies were formulated in the form of strategies.

<table>
<thead>
<tr>
<th>AIM</th>
<th>POLICY</th>
<th>STRATEGY</th>
<th>POLICY MECHANISM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
| As a basis for determining the allocation, usage, and regulation regarding space in small islands. | 1. Conservation, rehabilitation and improvement of the quality of the environment of coastal and small islands. | a. Improving the management of coastal ecosystems. b. Reducing the threat of damage of the coastal ecosystem. c. Reducing the threat of coastal pollution. d. Management of damage of coastal ecosystems (abrasion, | Everyone who utilizes certain strategic national area must comply to licensing provisions, namely location permits and management.

DOI: 10.9790/0837-2406086373 www.iosrjournals.org 69 | Page
<table>
<thead>
<tr>
<th></th>
<th>Sedimentation, flooding and seawater intrusion)</th>
<th>Utilization of coastal ecosystem in accordance with the carrying capacity of the land</th>
<th>Increasing public awareness to utilize environmentally friendly coastal resources.</th>
<th>Permits granted by the Governor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Increased social welfare of coastal communities.</td>
<td>Decreasing number of poor people in coastal areas communities</td>
<td>Empowering coastal villages</td>
<td>Decreasing unemployment and improving employment opportunities in coastal areas</td>
<td>Improving the quality of coastal communities</td>
</tr>
<tr>
<td>3. Utilizing potential of coastal and marine resources optimally, sustainably and equitably</td>
<td>Developing a maritime-based economy that is environmentally sound</td>
<td>Increasing investment and trade in primary, secondary and tertiary sectors</td>
<td>Enhancing and developing infrastructure for coastal areas</td>
<td></td>
</tr>
<tr>
<td>4. Institutional strengthening, preparation of management and regulating tools for the utilization of integrated and sustainable coastal area resource potential.</td>
<td>Increasing decentralization in the framework of regional autonomy through comprehensive coastal area development planning</td>
<td>Increasing law enforcement regarding the utilization of coastal areas and small islands</td>
<td>Spatial planning according to the carrying capacity of the land</td>
<td>Increasing implementation of community participatory in regional development</td>
</tr>
</tbody>
</table>

Source: East Nusa Tenggara Provincial Regulation Number 4 year 2017

The work program carried out by both Marine and Fisheries Department of East Nusa Tenggara and Kupang District is that of community economic empowerment, realized by providing assistance for farmer groups in form of facilities and infrastructure for seaweed farming and supervision. Indicators that the objectives have been achieved in the implementation of zoning plan for coastal areas and small islands in Kupang Regency are:

- Availability of standards and objectives of seaweed farming activities
- Existence of the vision, mission and work program of the “Penabur Kasih” farmer group in their activities.
- There are no other activities in the seaweed cultivation zone that can potentially harm seaweed cultivation.

Each implementing organization incorporates a vision, mission, standards and objectives, as well as a set of standard procedures for seaweed cultivation. The “Penabur Kasih” Farmers Group in its activities was supported by Kupang District government and its Marine and Fisheries Department through policies in the framework of Zoning Plan for Coastal Areas and Small Islands. However, in Kupang District itself there are no regional regulations that are derived from East Nusa Tenggara Provincial Regulation Number 4 year 2017.
2. **Resources**

Resources comprise of humans capital, funds, facilities, infrastructure and management. The indicators used in evaluating resources are:

a. Availability of human resources both in terms of quality and quantity
b. Efforts to increase the quantity and quality of human resource
c. Availability of budget for community empowerment activities regarding seaweed cultivation.
d. Aid funds and donors which are not bound.
e. Available facilities and infrastructure in seaweed cultivation activities.

The number of personnel in the Marine and Fisheries Department is limited, where they employ honorary staffs to support operational activities. In terms of quality of personnel, the Marine and Fisheries Department employs diploma, bachelor and master degree personnel. Efforts to improve quality of personnel through secondary school both bachelor and master degree is at the employees’ own expenses or by scholarship granted by the department. Means to increase personnel quantity is achieved through recruitment of honorary staffs. The availability in terms of department budget is limited for providing facilities and infrastructure assistance to farmer groups (See Table 5). Provision to farmer group assistance entails thorough selection. Moreover, there are no aid funds and donors who are bound, where assistance to farmer groups is solely sourced from internal department budgeting.

3. **Characteristics of the Implementing Organization**

Indicators that the program of seaweed farming empowerment has been carried out are as follows:

a. Adjusted competency in the empowerment of seaweed farming communities.
b. The existence of a bureaucratic structure in managing the farmers to comply to zoning regulations.
c. The existence of a Standard Operation Procedure in seaweed cultivation.

Farmer groups in seaweed cultivation comply to the zoning regulations. Moreover, they adhere to the standard operation procedures of seaweed cultivation according to the directions of the Marine and Fisheries Department for cultivation activities in the coastal areas.

4. **Tendencies/attitude of the implementers.**

The policy implementers (the community) are required to support the zoning plan which is being implemented. Basically, the implementer would follow the zoning policy because in the region there have been established customary rules that apply to the zones related to cultivation. However in Uiboa Village, activities of seaweed cultivation should require permission from the land owners. Implementers who are not seaweed cultivators continue to adhere to the rules by not carrying out activities other than the designated zones.

5. **Communication between relevant organizations and implementation activities**

Intense communication is very much needed in implementing a policy. The accuracy of communication between organizations and the consistency of policy objectives can be communicated between related organizations. Communication between organizations is measured through the indicators of:

a. Clarity of communication and consistency between implementing organizations.
b. Good coordination between organizations and implementers.

Implementation of empowerment program of seaweed farmers involved good communication in between the parties. Marine and Fisheries Department of both provincial and district levels always provide guidance and assistance to farmer groups. Moreover, they provide means of marketing the harvests.

6. **Economic, social, and political environment**

The indicators used to measure the economic, social, and political environment are:

a. Community participation
b. Elements of society support or rejection
c. The nature of public opinion or response
d. Increase in people's income
e. Job creation/new business activities

Economic, social and political conditions (external factors) effect the success or failure of seaweed cultivation. Cultivation of seaweed by the “Penabur Kasih” Farmers Group in Uiboa Village was initially turned down by the community due to the lack of understandings upon the benefits that it may convey in terms of improving community economy. The community rejection entailed actions of damaging the seaweed growth...
using fish poison. However, following efforts of communication involving knowledge transfer from the Marine and Fisheries Department, resolution was settled. The local people eventually became seaweed cultivators and experienced a better standard of living as a direct impact from selling seaweed harvests. Seaweed cultivation therefore creates new jobs.

Supporting factors
1. Concerning the social life in Uiboa Village, South Semau Sub-district, the community generally adheres to customary laws. Regional zoning is basically synchronized with and therefore does not contradict existing customary law.
2. Zoning of areas has existed since ancient times where local customary law regulates on areas that can or cannot be designated for exploitation and cultivation.
3. Seaweed cultivation activities eventually received positive response despite initial rejection towards the program. Reason to rejection is among the fear of limited zone for fishing activities by the locals. Mutual understanding between all parties is now settled. Locals who do not engage in seaweed cultivation do not interfere with the activities of farmers and adhere to regional utilization in accordance with zoning regulations. Moreover, the community still adheres to customary laws, one in which they would be imposed to penalties such as customary fines if the law were to be violated.

Inhibiting Factors
1. The majority of land ownership in Uiboa Village is owned by landlords who inherit the land from generation to generation. Accordingly, any activity involved upon their land should seek permission from them, even if were to be in accordance with the zoning regulations. This means that if there are farmer groups that want to cultivate seaweed, they must ask permission from the landlord to use the coastal area which is still considered belonging to the landlord.
2. The human resources of the Marine and Fisheries Department are still lacking in terms of quantity. There is still a handful of honorary staffs being employed in office operations, hence supervision of the zoning plan implementation is slightly hampered.

Policy Performance
From the discussion regarding zoning plan policy implementation for coastal areas and small islands in Kupang District, the overall performance of the program is summarized in the following points:

a. Zoning arrangement
The efforts from Kupang District Government via Marine and Fisheries Department in empowering seaweed farmer groups in utilizing their zoning are yet optimal due to the inhibiting factors.

b. Community economic empowerment.
The community economic empowerment program is generally optimal, evident by the change to better living standards of farmer groups and seaweed farming communities.

V. CONCLUSIONS

Conclusion
1. Implementation of zoning plan policy for coastal area in Kupang District, East Nusa Tenggara Province has not been optimal.
2. The implementation of policy is influenced by supporting factors, namely customary rules that are in line with the zoning plan for coastal areas, and by the inhibiting factor, namely the ownership of land which is controlled by landlords.

Suggestion
1. Intensive and periodic outreach needs to be initiated within the community so that regional zoning is carried out properly.
2. In accordance with Article 23 of the 2004 Regional Government Law, where 1/3 of 12 miles of marine management rights belong to the province, coordination between the Provincial Marine and Fisheries Department and the landlords is necessary regarding authority of the regional government to sea areas so that the farming community may have access and not to be blocked by landlords.
3. It is necessary to ratify Kupang regency regulations derived from East Nusa Tenggara Provincial Regulation No. 4 year 2017 concerning Zoning Plans for Coastal Areas and Small Islands as a reference for the Kupang District government in Zoning Plans for Coastal Areas and Small Islands in Kupang District.
Recommendation

1. It is necessary for coordination between the Marine and Fisheries Department of both Provincial and District levels in the discussion concerning Zoning Plans for Coastal Areas and Small Islands as derived from the East Nusa Tenggara Provincial Regulation No. 4 year 2007.

2. It is necessary for coordination between the Provincial Marine and Fisheries Department

REFERENCE

[4]. East Nusa Tenggara Provincial Regulation No. 4 year 2017 concerning Zoning Plans for Coastal Areas and Small Island period of 2017–2037
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[7]. Law Number 23 of 2004 concerning Regional Government
[8]. Law Number 1 year 2014 as an amendment of Law Number 27 year 2007 concerning Management of Coastal Areas and Small Islands
[22]. The Decree of Uiboa Village Chief Number 10 of 2016, dated January 18, 2016.