

# Dealing with the Port Impacts to Ensure the Sustainability of Port-cities Development by Employing Integrated Policy: A Case Study about Land Use in Semarang City

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**Abstract:** The role of port-cities has increased along with increase in the function of ports as the backbone of global economy in distributing logistics throughout the world. Port development has positive as well as negative impacts on the growth of port-city. There are positive impacts in economic and social aspects, while negative impacts affect on aspects of land use, transport and environment. Semarang is a major port-city in Indonesia that takes advantage of positive impacts and deals with negative impacts. The aim of this research is defining the role of integrated policy-making in responding to port impacts, to achieve sustainable port-city development in Semarang. The design of this research is a case study using qualitative data analysis with the use of Atlas.ti-8 software for the coding process. Fieldwork had been conducted in 2018 for 2.5 months by observation and semi-structured in-depth interviews. This paper focuses on land use policy-making process in responding to port impacts on the city. The results indicate inter-territorial integration in complexity of authorities, horizontal integration through formation of cross-sector ad hoc team, vertical integration through provincial- national review, civil society involvement through public consultation and land use policy responses to port impacts.

## 1 INTRODUCTION

Port cities have a crucial role in economic development by facilitating national and international trade. In the era of globalization, the role of port-cities has increased along with increase in the crucial function of ports as the backbone of the global economy in distributing logistics throughout the world. Lately there have been many conveniences for various business sectors to gain opportunities in order to reach international markets so that it will increase trade among countries that are based on the sea logistics system. Moreover, improved technologies that support trade such as e-commerce also increase the volume of international trade for goods that must be sent physically using sea transportation (Terzi, 2011). The port is the centre of a sea transportation network that facilitates

trade among countries and supports international supply chains with volume of goods distribution reaching nearly 80 percent of international trade with an increasing trend during 2015-2018 (UNCTAD, 2016, UNCTAD, 2018).

Port-cities accommodate two main functions that occur in the coastal areas such as trade and port activities. Other functions of the use of coastal areas such as for housing, industry, recreation are also the responsibility of the port-cities. To ensure sustainability, the cities have to be managed thoroughly and integrated (Clark, 1994).

Port and city have a close relationship of origin, from a historical point of view. Some trading activities in a coastal area form a simple trade node as a natural entrance to facilitate loading / unloading and shipping of goods using ships, which then developed into a port. During the growth, these port activities eventually had positive impacts on

economic growth and social development of the surrounding port area, which was then able to generate a small town around the port. In its development, this small city grew into a major port-city. Then, as negative impacts from the growing port activities, city has to deal with various problems such as land use issues, traffic congestion and environmental degradation (OECD, 2014).

Semarang, as a major port-city in Indonesia, benefits from positive impacts but has to bear the brunt negative impacts from port activities. Semarang City was selected as a case study because Semarang, as the capital of the province of Central Java, has a strategic location. This city is located on the northern coast of the island of Java in the middle of the province so it is easily accessible from all directions. Semarang City plays a crucial role in the growth of the province through logistics distribution sector as the port is the main entrance for distribution of goods to and from the province of Central Java. Semarang port has the potential to be developed because it has a large hinterland area consisting of 35 regencies/cities, so it should be planned and managed in an integrated approach to be sustainable.

Semarang has a long history as a port-city. The history of Semarang begins with the emergence of trading activities at the edge of the Semarang river (called Kali Semarang). These trading activities form trade nodes that continued to develop into a major port-city. Subsequently Semarang became the provincial capital of Java during the colonial period, in 1775. The role of Semarang as a port-city began to escalate when the Dutch colonial authority determined Semarang as the centre of the Northeast Coast of Java in the 18<sup>th</sup> century (Knaap, 2015).

The research is concerned about the impact of implementation of integrated policies in the field of land use, transportation and environment that must be taken into consideration by the main stakeholders of Semarang Port-city. It is imperative that both pros and cons of port development be considered to ensure sustainable development. The key stakeholders are the Government of Semarang City as the local government, Harbourmaster and Port Authority (KSOP) as the authority of the port and Pelindo III as the port operator in the Port of Semarang.

This paper was written, as a part of the research, which will focus on the implementation of integrated policies in land use aspects, particularly response to port impacts, within the framework of the integrated policy towards sustainable development in Semarang Port-city. The paper begins with an

elaboration of the conceptual frameworks of integrated policies in ports, port-cities and sustainable development in section 2. Then sections 3 and 4 will discuss methodology and findings respectively, which is followed by conclusions in section 5.

## 2 CONCEPTUAL FRAMEWORKS

Conceptual frameworks are the model that describes relationships about several relevant theoretical building blocks, particularly those related to port development, port impacts on port cities, and sustainable development as well as integrated policy. The implementation of integrated policies in port-cities is an emphasis in the research, especially in relation to policies in the field of land use, transportation and the environment in responding to the positive and negative impacts of port development. Integrated policy acts as a catalyst that is expected to assist and accelerate port-city to achieve sustainable development. The research on the application of integrated policies in port-cities, mainly in the fields of land use, transportation and environment in responding to the positive and negative impacts of ports is expected to be a new contribution in policy-making process in port-cities in general. Port-cities in Indonesia, in particular, are expected to be able to implement this conceptual framework model in policy-making, specifically in the fields of land use, transportation and the environment.

In addition, this conceptual framework model was created to guide the research in answering the research question such as: how integrated policy-making can contribute to the sustainable development of port and port-city relationship, in the case of Semarang Port-city. Moreover, this model also seeks to answer the following sub-research questions:

- 1) How can be understood about the relationship between port and port-city?
- 2) How can the role of sustainable development in the port and port-city relationship be understood and operationalized, in the case of Semarang Port-city?
- 3) What is the role of integrated policy-making in achieving sustainable development in Semarang Port-city?

## 2.1 Relationship between Port and City

The conceptual frameworks start from relationship between port and its city. This sub section is a response to the first sub research question namely relationship between port and city. Alderton (2008), Talley (2009) and, Stopford (Stopford, 2009) describe port in the similar tone that port is an interface between ship and sea which is equipped with facilities for ship berths as well as maintenance, and equipped with several equipment for moving goods from ship to land and vice versa. In addition, there are terminal facilities for the movement of goods and people.

Most ports are located around cities to facilitate access to sellers, buyers, factories and manufacturers (Merk, 2018), so that there is a close historical relationship between ports and cities. In general, many cities flourish and thrive from ports. Many cities begin as inter-regional trade nodes that use ports as natural gateways and use the sea as interconnected regions. Further development of these trades encourage small towns to grow and develop into cities that further grow into major cities. That is the origin of port-cities.

During its development, relationship between ports and cities are mutually influenced. The development of ports will affect the growth of port-cities, and the growth of port-cities will affect ports development. The conceptual frameworks of this research only emphasize on port development impacts on the port-cities growth.

## 2.2 Impacts of Port Development to City

In general, the activities of ports development have two major influences on port-cities growth. This sub section is still a response to the first sub research question namely relationship between port and city.

The first impacts are considered as positive impacts, which subsequently transformed into port-related benefits of port-cities. These advantages consist of several dimensions in terms of economic and social development. These positive impacts tend to be spread out to surrounding cities. It means that the cities around the port-cities can also benefit from these positive impacts. Ports may contribute crucial advantages in economic development in coastal areas through job creations, generate tax (Miller, 2017), generate more revenue (Bichou and Gray, 2005), both directly and indirectly (Ferrari; Percoco, et al., 2010), as well as stimulating new business opportunities (Talley, 2009). Ports also deliver

significant contribution for economic development in hinterland areas because ports connect sea and land by using ships for transportation (Dwarakish and Salim, 2015). These activities generate first contribution of ports to cities namely cargo handling business. It is one of the earliest economic activities that acts as a driver to local jobs creation, tax revenues and other indirect economic activities (Xiao and Lam, 2017). The impact on social aspect could change local society life due to relocation of villages for port expansion, change in lifestyle, formation of slum areas, effect on tradition and culture and disturbance in the beach recreation areas. (OECD, 2014). Moreover, relocation and resettlement of local society may elicit some changes in population composition regarding racial issues between minority-majority groups and distribution of population related with age composition (Xiao and Lam, 2017).

The second major impact is considered as negative impacts of ports which consequently converted into port-related problems of port-cities. Those disadvantages affect several aspects such as land use, transport, and environment. Usually, these negative impacts tend to be localized inside the port-cities. The typical requirement of modern ports is the need for a very wide space so ports cover relatively large area of land in the cities. Usually, high density of work and effects of agglomeration are believed as the reasons of the growth of urban economy and this effect only occur in the port areas. The impacts of ports in term of urban economic development influence the surrounding ports areas only, (OECD, 2014) so that it makes land use in the area around the port become increasingly dense and complicated. Then port activities multiply traffic density that leads to traffic congestion particularly caused by traffic of hinterland to and from ports areas (OECD, 2014). Environmental degradation around the port is due to port activities such as air pollution sourced from ships engines, cargo-handling and port equipment, engines of railroad locomotives and trucks (Talley, 2009). Oil spills are the significant cause of water pollution at ports, even from normal or accidental activities. Most of the oil spills come from vessel movement, loading/unloading of oil tankers, leakages and the operation of ballast water (OECD, 2014). Moreover, untreated vessels ballast water, waste disposal of vessels, antifouling paints in vessels and dredging activities are the cause of water pollution in the port area (Talley, 2009). Other source of environmental pollution is soil contamination from oil spills and chemicals on the ground (Miola; Paccagnan, et al., 2009). The

disturbance created by vessels and port equipment during cargo handling. Trains, trucks, and other maintenances activities are the other sources of noise pollution in port areas. This continuous noise may cause sleep disturbance (OECD, 2014).

### 2.3 Sustainable Development of Port-City

Sustainable development term was introduced by the United Nations World Commission on Environment and Development in its report in 1987 namely “*Our Common Future*” (United Nations, 1987). This sub section is a response to the second sub research question namely the role of sustainable development in relationship between port and city. Diesendorf (2000) reveals that sustainability is for the long term and establishes moral value of fairness and balance between current and upcoming generations. In addition, United Nations (United Nations, 1997) implements the definition of sustainable development and its three dimensions in the description of development in the Agenda for Development as follows: “Development is one of the main priorities of the United Nations. Development is a multidimensional undertaking to achieve a higher quality of life for all people. Economic development, social development and environmental protection are interdependent and mutually reinforcing components of sustainable development.” In 2015, UN established the “2030 Agenda for Sustainable Development” that includes “17 Sustainable Development Goals” (United Nations, 2015).

In dealing with several impacts of ports, either positive or negative, port-cities need to employ sustainable development concept to maintain sustainability of their roles in the globalization period as the frontline. This conceptual framework will focus on typical aspects of sustainable development such as economic and social as well as environmental aspects. All these dimensions will deal with port-related benefits and port-related problems of port-cities comprehensively.

### 2.4 Integrated Policy in Sustainable of Port-city Development

Several port-related benefits and port-related problems of port-cities will be addressed by implementation of integrated policy to achieve sustainable development (see Figure 1). This sub section is a response to the third sub research question namely the role of integrated policy-

making in achieving sustainable development in port-city. An integrated policy is crucial for port-cities in dealing with the interaction between ports and port-cities, since they are closely interconnected and support each other so that port-cities have to ensure the implementation of policy integration among economic, social and environment aspects which are important for sustainable development (UN-ESCAP, 2015). These sustainable developments of port-cities will sustain the leading roles of port-cities in the globalization age as integrated parts of worldwide supply chain system of logistic (OECD and ITF, 2009, Merk and Notteboom, 2015). Integration is the key of sustainable development. Geerlings and Stead (Geerlings and Stead, 2003) emphasize that the integration is significant for sustainable development, particularly in land use fields and transport, as well as environmental aspect. It is a valuable approach of development of cross-sectors by crossing border and even across generations. Every decision should concern the prospective influences on the environment, the society and economical effect in the future (Strange and Bayley, 2008).

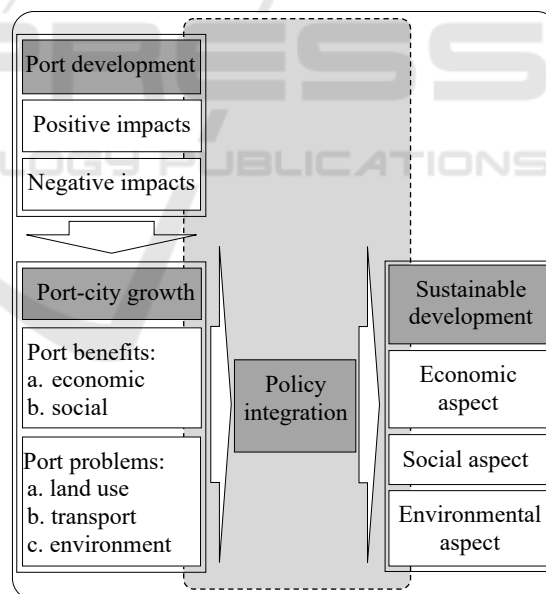


Figure 1: The model of conceptual frameworks for integrated policy in sustainable of port-cities development.

Policy integration sequence (Geerlings and Stead, 2003, Strange and Bayley, 2008),(Meijers, 2004) can be described as follows: co-operation which involves dialogue and information, each organization works concurrently to realize their-own targets so that output is efficient sectoral policy.

Then coordination (similar policy term with consistency and coherence) includes co-operation as well as openness to prevent conflicts. Mutual decisions may be not the same as their original outcomes. Policy coordination is more far-attaining than co-operation. The output is adjusting sectoral policies that are mutually enforcing and consistent. Lastly, integration or joined-up policy, which involves co-operation elements such as dialogue, discussion and information; includes co-ordination elements such as clear and transparent concept to prevent conflicts; and contains joint working, as efforts to build synergies among policies and use similar objectives to formulate policy. Policy integration is better than co-ordination with one joint policy as the new output related to sectors.

Furthermore policy integration can be distinguished (Geerlings and Stead, 2003) as follows: vertical integration (among various levels of government), horizontal integration (among various sectors or professions inside an organization), inter-territorial integration (among different authority with common interests such as resources and infrastructure), and intra-sectoral integration (combining among various sections or professions in a department and among fields of environment).

In conclusion, as illustrated in figure 1, the role of policy integration is as the catalyst to assist and accelerate port-city in policy-making proses particularly in the fields of land use, transportation and environment in responding to the positive and negative impacts of port to the city in order to reach sustainable development. The implementation of integrated policies in policy-making process of port-city, mainly in the fields of land use, transportation and environment in responding to positive and negative impacts of ports is expected to be a new contribution in policy-making proses in port-cities in general.

### 3 METHODOLOGY

The research design is a case study. Semarang is selected as a case study because this city is one of the three big port-cities on the Java Island in Indonesia, which has a history as a port-city. The data collection stage had been carried out in order to get appropriate and sufficient data, as a basis for observing and understanding the phenomena in the real-world context in depth and specifically, in order to analyse the policy-making process, particularly in the field of land use, transportation and environment

in Semarang Port-city. This study employs qualitative data collection, both for secondary data sources and primary data sources.

The collection of secondary data provides the preliminary overview about the profile of each stakeholder, the government policies in the three fields mentioned above and other related regulations before carrying out the fieldwork. Moreover, the secondary data can also enrich the process of making questions for semi-structured in-depth interviews at the primary data collection stage. Secondary data were obtained through contact persons in each city government agency in the form of data archives such as reports, minute of meetings and academic script during the policy-making process. Furthermore, planning and policy documents as well as related regulations, within the scope of the city government, provincial government and even the central government were obtained through internet-based search.

The collection of primary data delivers qualitative data, which is the main source of this research, in the form of semi-structured in-depth interviews and direct observation that are recorded by using digital recorder and by making several notes. The fieldwork was conducted in early October until mid-December 2018 in Semarang Port-city. Direct observation during fieldwork provides visual conformation of the phenomena, which takes place naturally. Then, this can enrich the interview process with the triangulation approach. Semi-structured in-depth interviews were conducted using a list of open-ended questions as a guide. The list is an implementation of the conceptual frameworks, which is a derivation of related theory building blocks. In general, this list contains questions anticipated to answer the main research question, namely how integrated policy-making can contribute to the sustainable development of port and port-city relationship, in the case of Semarang port-city. Moreover, those questions are also supposed to answer the sub-research questions as follows:

- 1) How can be understood about the relationship between port and port-city?
- 2) How can the role of sustainable development in the port and port-city relationship be understood and operationalized, in the case of Semarang Port-city?
- 3) What is the role of integrated policy-making in achieving sustainable development in Semarang Port-city?

Interviews were conducted with the official representative of each of the relevant stakeholders.

The main stakeholder is Semarang City Government as the holder of the local government authority such as the Mayor, Regional Development Planning Agency, City Spatial Planning Office, Transportation Office, Public Works Office, as well as Environmental Office. Other chief stakeholders are the Office of Harbourmaster and Port Authority (KSOP) as the port authority holder and Pelindo III as the port operator holder. In addition, interviews were also conducted with other stakeholders involved in the policy-making process, such as Semarang City Regional People's Representative Council (DPRD II/City Council), academics, experts, professionals, business associations, professional associations, non-governmental organizations, communities, journalists, heads of sub-districts in the port area, and heads of RWs/RTs (the smallest informal unit of society), informal leaders also residents around the port area. The respondents are expected to have sufficient capacity, knowledge and authority regarding the policy-making process in the field of land use, transportation and environment in Semarang Port-city.

In order to meet the appropriate persons, formal procedures were carried out to contact each representative of above mentioned relevant stakeholders. Each of these stakeholders or agencies would then give recommendations about the appropriate persons to contact who are directly involved in policy-making process or who currently have the authority in policy-making. The respondents were generally top level and middle level officers who were at least the first level officers, and several retired top and middle level officers who were directly involved in the policy-making process. The appropriate respondent representative of each of the above stakeholders were located using snowball sampling technique by asking for recommendations from active officers, so that all representative of each stakeholder are represented by at least one qualified respondent.

All data were processed by using Qualitative Data Analysis method. All recorded interviews were transcribed from voice data to written data. Furthermore, coding process was carried out using Atlas.ti-8 software by incorporating all interview transcript data, interview notes and secondary data such as policy documents, regulations and minute of meetings. The coding process, by using a deductive approach, began with organizing indicators obtained from the conceptual framework. The indicators serve as a preliminary guideline in the coding process. Data were grouped according to their similarity to

each other, then the groups were given names as new sub-indicators that still have relevance to their existing indicators. Furthermore, when the similarities of the groups did not have relevance to the existing indicators or sub-indicators as contained in the conceptual framework, new indicators and sub-indicators would emerge. After that, all the results of coding process were arranged in the matrix form so that the composition and relationship among the indicators and sub-indicators are clearly visible.

Based on the results of the coding process, the interview data from various respondents with similar indicators or sub-indicators were compared and analysed with the documents from secondary data such as policy documents, regulations and minute of meetings. Elaboration of this analysis process to ensure the relationship and consistency between indicators and sub-indicators contained in the conceptual framework in answering the main research question along with sub-research questions.

## 4 FINDINGS

### 4.1 The Challenge of Inter-territorial Integration in the Complexity of Authorities

There is a complexity of authorities in the relationship between the port and the city among the main stakeholders in Semarang City. In this port-city, there are three main stakeholders namely the city government, the port authority and the port operator. These main stakeholders have significantly affected the relationship between the port and the city. In general, the relationships among the key stakeholders in the Semarang Port-city can be described in figure 2.

The first main stakeholder is Semarang City Government, as the authority holder of the local government of the city. The City Government is equipped with agencies and offices that generally represent each sector. This research only focuses on agencies from the Semarang City Government which are related to policies in the fields of land use, transportation and environment. Agency and offices that have the primary role are the Mayor, Regional Development Planning Agency, City Spatial Planning Office, Transportation Office and Environment Office. The city government has authority over the area of Semarang City in the form of regional autonomy, while the mayor is elected directly by the citizens of the city through regional

elections held every five years. Regional Development Planning Agency is a body that has a coordinative nature among the sectors, while City Spatial Planning Office, Transportation Office and Environmental Office are the bodies that deal with the related sectors. All of these agency and offices are responsible to the Mayor.

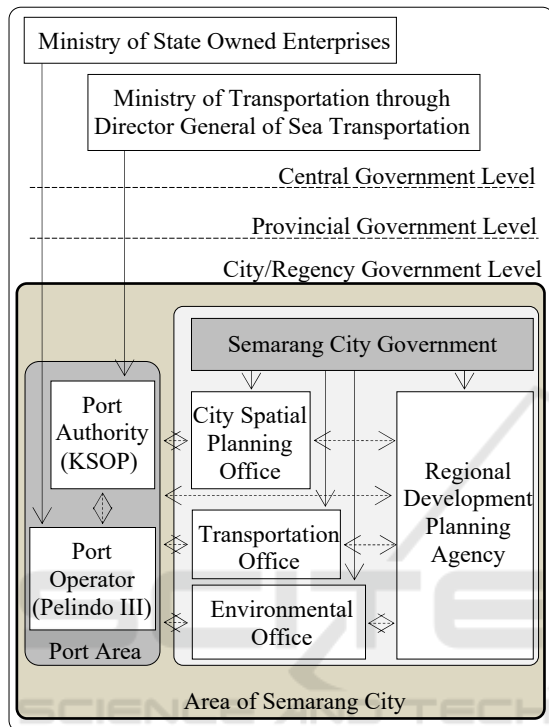


Figure 2: The complexity of authorities among the main stakeholders in Semarang Port-city.

The second main stakeholder is the Office of the Harbourmaster and Port Authority (KSOP), as the authority holder of the port in Semarang City. KSOP is the office that is responsible to the Ministry of Transportation through the Director General of Sea Transportation, so structurally this office is part of the Central Government. KSOP has authority over the port area in Semarang City.

The third main stakeholder is Pelindo III, as a port operator in the port of Tanjung Emas in Semarang City. Pelindo III is a state-owned enterprise that is responsible to the Ministry of State-Owned Enterprises, so that this company is organically part of the Central Government. As a business entity, Pelindo III is a port operator in the form of a Port Business Entity (BUP). In addition to running its business, Pelindo III has Land Management Rights (HPL) granted by the Central Government to the Tanjung Emas Port Working Area, in Semarang City.

The complexity of authorities among the main stakeholders occurs because there are differences in command lines and responsibilities of each of the main stakeholders (see figure 2). In general, in daily operational activities, both KSOP and Pelindo III have to comply with all applicable policies and regulations, both at the central, provincial and regional levels. Pelindo III, as a port operator is fully responsible to the Ministry of State-Owned Enterprises in terms of corporate and financial responsibilities, but Pelindo III has to also comply with all regulations set by the Ministry of Transportation through the KSOP as port authority in terms of shipping safety. Whereas as a stakeholder who has an interest in Semarang City, Pelindo III has to also comply with applicable local regulations at the city or provincial level. KSOP, as the port authority, is directly responsible to the Ministry of Transportation. Besides that, KSOP and Pelindo III, as a port operator, work together in maintaining the safety of shipping and complying with local regulations set by the Mayor or the Governor.

Semarang City Government as the owner of authority in Semarang City area must also comply with all regulations set by both the central government and the provincial government. As an autonomous region, Semarang City Government has the right to issue Regional Regulations, together with Semarang City Regional People's Representative Council (DPRD II / City Council). Policy in the field of land use is regulated in the Semarang City Regional Regulation on Regional Spatial Planning (RTRW). Since a while ago, the port area has been considered as the area of the central government that seems to have special autonomy, so that Semarang City Government cannot regulate land use within the port area.

The complexity of authorities among main stakeholders is a major challenge in implementing integrated policy in Semarang Port-city particularly in the fields of land use, transportation and environment. This is because port is an area that has major impacts on the city, not only positive impacts on economic and social development but also negative impacts on land use, transportation and environmental aspects. This paper only focuses on aspects of land use. In land use zoning, as stipulated in Semarang City Regional Spatial Plan, land use within the port area is only set as a transportation facility, in general, without further description related to land use in detail of the zoning of the transportation facility. This is because Semarang City Government does not have authority to regulate

within the port area, only KSOP, as the port authority holder, has the right to regulate zoning within the port area.

Port, in carrying out its activities, has to make a Port Master Plan for future development. In the process of making the Port Master Plan, the KSOP has to obtain approval and recommendations from the Mayor. This is actually a good opportunity as a starting point for the City Government to be involved in land use planning within the port area, together with the port authority, so that the negative impacts of the port from land use aspects can be anticipated such as slum dwelling around the port area and mixed land use for zoning as warehousing and residential areas. However, this is not easy to execute because there is no mandatory for the Port Authority to implement all the recommendations of the Mayor. The recommendations are implemented within the authority of the KSOP as the port authority holder. When the Port Master Plan is finished and determined by a Ministerial Decree, the Port Master Plan must be fully accommodated in the city land use plan in the future because it already has the legal force in the form of a ministerial decree.

Inter-territorial integration, which is an integration between different authorities with common interests such as resources and infrastructure, cannot be executed optimally among Semarang City Government, KSOP and Pelindo III. The main reason is that each stakeholder has different vertical responsibilities and has the respective authority over their respective territories. However, at least there have been efforts to carry out inter-territorial integration, even within the limits of their respective authority. There have been efforts from the port authority to request approval and recommendations from the Mayor in the process of making the Port Master Plan. Likewise, Semarang City Government employs cooperation and coordination with KSOP and Pelindo III by adopting the Port Master Plan entirely into Semarang City Regional Spatial Plan. This decision was taken with the consideration that the master plan regulates within the port area that the city government does not have the authority to regulate the land use within port area. Communication among competent related parties has begun even though it still uses formal communication and time consuming in the process of coordination and integration because each party has to consolidate internally according to their respective authorities and responsibilities.

#### **4.2 Horizontal Integration through the Formation of Cross-sector Ad-hoc Team**

The land use policy in Semarang City is contained in the Semarang City Regional Spatial Plan which is determined based on the Semarang City Regional Regulation number 14 of 2011 regarding Semarang City Regional Spatial Plan for 2011-2031.

In the policy-making process, City Government forms a technical team which is an ad hoc cross-sector team with the Regional Development Planning Agency as the leading institution because this body has a horizontal coordinating function among the sectors under the city government. This technical team works for a duration of one fiscal year with the main task of policies-making in the field of spatial planning. This land use policy concerns almost all sectors in Semarang City that requires space as the place to carry out its activities. The technical team essentially requires bureaucrats as member, who have proficiency, capability and in-depth knowledge related to policies in their respective sectors, so that they can represent the policies of each sector they represent. With the team members who meet the requirements, the discussions are expected to be valuable to yield prompt and qualified decisions. The members of this technical team consist of sectors whose activities are closely related to spatial requirements, such as the Regional Development Planning Agency as the coordinator, the City Spatial Planning Office, the Transportation Office, the Environmental Office, the Agriculture Office, the Housing and Settlement Area Office, and Public Works Office, as well as Land Office. The technical team is in charge of drafting concepts with the assistance of a consultant team, which has been selected through an auction process with the task of assisting the process of collecting data and providing updates on regulations related to spatial planning.

The horizontal integration process begins when the technical team works intensively in formulating policies which are realized through intensive weekly meetings. There are two types of meetings to build two-way communication such as plenary meeting and certain sectors meeting. Plenary meeting tend to use formal communication while certain sectors meeting mostly use informal communication apart from formal communication. At this stage, horizontal and intra-sectoral integration occurs among members of the Technical Team, who represent various city government sectors.



Sectoral egos are phenomena that arise when discussing policy formulation related to sector priorities, for instance when discussing zoning for housing. The agriculture office is insistent and adamant to maintain total amount of sustainable rice fields that has to be maintained in Semarang City, as a mandate from the Ministry of Agriculture through the provincial government. In another perspective, the Housing and Settlement Area Office proposes to increase the area for housing because the need for new residential areas always increases every year. This dynamic ends with the emergence of a common understanding that the purpose of the spatial planning policy is for the common goal, namely the development of Semarang City as a whole. However, it is cross-sectoral, so that it will not be able to please all sectors. Fortunately, after calculating in more detail, the need for additional areas for housing can be met while maintaining the amount of land area for sustainable rice fields.

#### **4.3 Civil Society Involvement through Public Consultation**

After the policy-making process in the land use sector is complete, the next step is to conduct public consultations. This process is carried out with the aim of socializing with the community and at the same time to collect community aspirations. This consultation process is mandatory by the regulations for a minimum of two times. The public consultations that have been carried out more than twice uses two approaches. The first approach is territorial based, namely by holding meetings in each sub-district attended by village heads, informal leaders, communities and non-governmental organizations. The second approach uses the focus group discussion method on certain segments of society such as academics, experts, professionals, business associations, and professional associations.

In the first approach, which is regional-based, the public consultations tend to be a formality, because it is held in a short time without giving much time for the communities to learn more about the draft material on land use policy. Usually the material given to participants at the beginning of the event is in the form of an executive summary, so there is not enough time for participants to study deeply. In addition, generally people still do not have sufficient knowledge and capacity in understanding spatial planning so that their questions and aspirations tend to be normative, qualitative and pragmatic, for instance the questions are related to micro problems such as clogged drains and damaged road within a

residential complex. Spatial planning delivers beyond than small matters.

In the second approach, which is based on certain segments of society, the public consultations tend to be of higher quality because most of the participants have the capacity to understand spatial policy and many have interest in commercial use of space.

#### **4.4 Vertical Integration through Provincial and National Review**

After completing the technocracy process in the technical team, the next process is political process. This political process involves Semarang City Regional People's Representative Council (DPRD II) or City Council in discussing Draft of Regional Regulation concerning Semarang City Regional Spatial Plan. At this stage, there is lot of input from the members of the city council in voicing the aspirations of their constituents, related to various issues such as economic, social and environmental issues, including the emergence of aspirations from the business sector. The dynamics during this discussion process are the involvement of the public, which is indirectly represented to the members of the city council involved. When the political process with the city council was completed, then the draft was approved by the city council in a plenary session. Next step is the application for the Governor's approval letter.

In this stage, vertical integration appears when there is a review of Semarang City Regional Spatial Plan from a policy perspective at the provincial level, such as in the form of maintaining the amount of land for sustainable paddy fields. This vertical integration process tends to use formal communication and is time consuming. After the provincial policy of the province is accommodated, then the governor's approval letter is issued. Then the vertical process needs to request for approval from the Ministry of Public Works to be aligned with various national policies. Then, as the last vertical integration process, the approval of the Ministry of Home Affairs was requested before being stipulated as a Semarang City Regional Regulation Number 14 of 2011 concerning Semarang City Regional Spatial Planning for 2011-2031.

#### **4.5 Policy Responses in the Field of Land Use to Port Impacts**

The city government has not yet made a specific study or assessment on the response to the positive and negative impacts of the port on the development

of Semarang City comprehensively. Semarang City Government also has not yet specifically counted the responses to positive and negative impacts of port on city development, as the main consideration in the policy-making particularly in the field of land use in Semarang Port-city.

However, there have been efforts from Semarang City Government to pay attention to the influence of port on the city development, although partially. This can be seen in the change in land use zoning in the area around the port. The existing condition is zoning for residential areas, while the zoning plan for the area around the port is mostly used for warehousing and mixed functions consisting of residential areas, trade and services.

## 5 CONCLUSIONS

In general, the main stakeholders in the port-city such as Semarang City Government, the Office of the Harbourmaster and the Port Authority (KSOP) as well as Pelindo III, realize that in carrying out their duties, they have to cooperate, coordinate, and even integrate with each other, who often differ in authority and perspective. Semarang City, which is one of the major port cities in Indonesia, faces several challenges in carrying out the process of integration in the policy-making, particularly in the field of land use. These main stakeholders have made a number of collaborative, coordinated and integrated efforts in the policy-making process, within their respective authorities, particularly in the field of land use to achieve a common goal, namely for the future development of Semarang City.

The complexity of authorities is a significant challenge in conducting inter-territorial integration where each major stakeholder cannot break through the differences in authority and structure of responsibilities in policy-making in the field of land use. So what has been done is optimally integrating within each authority. In making the Port Master Plan, the Harbourmaster and the Port Authority (KSOP) requests approval and recommendations from the Mayor, which is mandatory based on regulations. On the other hand, in the process of making Semarang City Regional Spatial Plan, the technical team also made an integrated effort by discussing and accommodating the Port Master Plan into Semarang City Regional Spatial Plan on the land that was intended specifically for the port. Furthermore, the city government made some adjustments in response to the presence of port in the area, such as changing the designation around the

port area for warehousing, trading and service functions. In this inter-territorial integration, among related stakeholders tend to use formal communication approach. This process is time-consuming because each party must adjust according to their respective regulations and authorities.

Horizontal integration occurs among several bodies under the authority of Semarang City Government. The formation of a technical team, which is an ad hoc cross-sectoral team, is a strategy to reduce sectoral egos that emerge from each sector. This sectoral ego arises because each of these sectors must meet the provisions of the relevant Technical Ministry. In general, the problems of sectoral egos can be overcome by the technical team. Each sector understands the main shared goals under the authority of Semarang City Government. This integration process uses two kinds of communication approaches such as formal communication and informal communication. However, the informal approach for communication is more often used. Each member of the technical team already knew each other well. Interpersonal interactions among the members of technical team are caused by several things, among others, due to the mutation process between agencies and offices in the scope of Semarang City Government on a regular basis. This mutation process could be due to promotion or rotation process. With this mutation process, people can get to know each other personally. In addition, because most of the agencies and offices are located in the same office complex, the process of social interaction leads them to get to know each other well. Getting to know each other personally and egalitarian attitude among the members of the technical team makes this technical team solid and makes it easier and faster in solving problems that arise between sectors, including the emergence of sectoral egos. This horizontal integration process is an effort of city government to carry out a bottom-up approach in policy-making by accommodating the aspirations of each sector within the city government based on applicable regulations, including involving the participation of civil society by conducting public consultations during the policy-making process.

Vertical integration occurs when the review processes are carried out, by both the provincial government and central government, to ensure that programs from the province and the central government are accommodated in the Semarang City Regional Spatial Plan. This integration process uses a formal communication approach. This process is time consuming because each level of government

has to ensure that their respective policies are accommodated. This vertical integration process is an attempt by the government to carry out a top-down approach in policy-making, because when provincial and central government policies are not accommodated by the city government, Semarang City Regional Spatial Plan cannot be ratified.

The involvement of civil society is possible in the policy-making process through public consultation, because this is mandatory by the regulations, at least two times. The public consultations were carried out more than twice during the land use policy-making process. Although in practice, the aspirations of civil society could not all be accommodated because of differences in the capabilities of the communities in understanding spatial planning. In addition, regulations regarding spatial policy-making are also a tool used to filter all public aspirations. This public consultation process is an attempt by city government to involve civil society participation in policy-making process, even though the accommodations of these aspirations still have to refer to the relevant regulations.

In the policy-making process in the field of land use, the city government has not yet considered a specific study or assessment on the responses of the city government to the positive and negative impacts of the port on city development in the future. However, there have been efforts to respond to the existence of port by changing zoning of land use in the area around the port, from residential areas to zoning for warehousing and mixed functions consisting of residential areas, trade and services. With this zoning change, it will support the port's operational activities and at the same time be able to utilize the positive impacts of the port, particularly in the economic development of Semarang City.

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