Taxation System for Maintenance of Flooding Building (Study Case is The Banger Polder Project)

Slamet Setioboro[1], Slamet Imam Wahyudi[2], Rick Heikoop[3]
[1]Deparment Of Civil Engineering, Sultan Agung Islamic University
Jl.Raya Kaligawe Km.4, Kaligawe,Semarang, Jawa Tengah, Indonesia
[2]Deparment Of Civil Engineering, Sultan Agung Islamic University
Jl.Raya Kaligawe Km.4, Kaligawe,Semarang, Jawa Tengah, Indonesia
[3]Rotterdam University of Applied Sciences
G.J. de Jonghweg 4 - 6, 3015 GG Rotterdam, Netherland
Email: Slamet.Setioboro@std.unissula.ac.id; siwahyudi@yahoo.com; t.h.heikoop@hr.nl

Abstract- The Banger Polder Poject is a twinning project in which Indoensian authorities and Dutch parties work together to realize a polder system and an organization to operate and maintain this system in the Banger area in Semarang, Indonesia.(BPP, SIMA). Banger polder system is a part of the drainage system in the Middle Semarang area consisting of 524 ha which is made as a flood catchment area. This study aims to determine an appropriate concept to apply the taxation system for maintenence of the Banger Polder Project in accordance with the socio-economic conditions of Indonesian culture. The study focus on the implementation of the system of taxation in the case of ground water extraction. Most of Inhabitants Semarang are located in the lowlands take advantage of this by making the ground water wells dug (shallow) with an average depth of 3-18 m. The study use quantitative method to express the data in numbers and analysis SWOT method. In the study, the Netherlands (Water Board) was chosen as an example of implementation taxation in the field of water. So that, the goverment of Semarang can make some new rules or regulations in Taxation System.

Keywords: Banger Polder, Flood, Taxation sytem, Underground water.

1. Introduction

Flooding problems in the city of Semarang is not a new thing for the development of the area. In the flooding problems Semarang, there are several variables that can lead to flooding especially in Semarang coastal areas, including:

- Flooding caused by excessive rainfall and lack of catchment areas. (s.imam wahyudi, 2010).
- Flooding caused by rising sea levels due to climate and land subsidence in the area by over exploitation of ground water and the load of construction. ((Dian Harwitasari, 2009).
- Flooding caused by tidal. Tidal flood has been threatening Semarang for many years. It occurs periodically due to high tide. (Dian Harwitasari, 2009).

Losses caused flooding / inundation rob the serious and increasing from time to time that damage to infrastructure, the environment, traffic congestion, a lot of land could not be used and the disruption of economic activity in the region. (s.imam wahyudi, 2010). With so many losses caused by natural disasters this year, therefore it will need a serious effort by the government handlers to improve socio-economic life of people in the area. So in 2010, the government of Semarang established an agreement with Dutch water board to make the Banger polder system in Semarang. (Bpp Sima 2010)

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Banger polder system is a part of the drainage system in the Middle Semarang area consisting of 524 ha which is made as a flood catchment area and to be comprehensively handled by the government of Semarang. (skip. Dwii). Construction of polder systems cannot be simply built, but it need to be well-planned and implemented in an integrated manner, adapted to the regional spatial planning and water management in a broader aspect (s. Imam, 2011) .With the existence of Banger Polder, it is highly expected that the flooding which has been occurred for many years in the North of Semarang can be solved. In addition, Semarang community in the area of flood area have the obligation to pay taxes by Rp.7000,00 / person / month for cost maintenance.

In other case, there are many industries using ground water for purposes of their selves. The water withdrawal will reduce the ground water. This condition will cause the soil pore lam did. In the end, the land could not support the weight on it which causes Land Subsidence in the area. The prediction of the land subsidence in Semarang City is increasing in longer terms. Subsequently after the sea level rise phenomena and exceeding groundwater usage, it is projected that the area may loss 328.5 hectare per year in 2010 and its getting worse by the year 2020 with total loss of 1464 hectare per year. It means that the area shall suffer from further economic loss and other unquantifiable loss (Marfai, 2011).

2. Methodology

Study will use several methods to answer all the sub-question is needed. These methods include:

a) Quantitative method
   The research data are expressed in numbers and analyzed with statistical techniques. Research is often used this way is descriptive (survey), correlation Research, experimental, and causal comparative.

b) Analysis SWOT Method

3. Result And Discussion
3.1. Identification of Maintenance Costs

We assume direct cost for Banger Polder Project Development includes construction expenses and operation and maintenance. Construction cost amount is about US $ 10 million. The construction cost will be divided in to four stages and the operation and maintenance cost is about US $ 50.000 per year. The OM cost will be spent after construction is finished and we assume it will be in the fifth year. The following table describes the investment pattern for constructing BPP.

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Table 1. Cost for BPP

Term in years	Costs		
	Cost Construction	Operation and Maintenance	Total
0	$4,000		$4,000
1	$2,000	$50	$2,050
2	$2,000	$50	$2,050
3	$2,000	$50	$2,050
4		$50	$50
5		$50	$50
6		$50	$50
7		$50	$50
8		$50	$50
9		$50	$50
10		$50	$50

Source: WBI, 2007

Data Industry of Semarang (Central Java)

The industrial sector is divided into large and medium industries and small industries and households. Definitions used BPS, big industry is a company with a workforce of 100 people or more, the industry is is a company with a workforce of 20 people up to 99 people, small industry and households, is a company with a workforce of 5 up to 19 people, and home industry is a company with a workforce of 1 to 4 people.

Banyaknya Perusahaan / Unit Usaha Menurut
Jenis Industri di Jawa Tengah Tahun 2008 - 2012
Number of Establishment by Kind of Industry in Jawa Tengah 2008 - 2012

Jenis Industri Kind of Industry	2008	2009	2010	2011	2012
(1)	(2)	(3)	(4)	(5)	(6)
01. Agro Industri	323.618	323.198	324.684	328.907	329.254
- Besar	283	288	269	297	301
- Kecil dan Menengah	323.335	322.910	324.415	328.610	328.953
02. Industri	321.088	321.271	320.181	316.252	316.586
- Besar	498	501	495	528	534
- Kecil dan Menengah	320.590	320.770	319.686	315.724	316.052
Jumlah					
- Besar	781	789	764	825	835
- Kecil dan Menengah	643.925	643.680	644.101	644.334	645.005
- Total	644.706	644.469	644.864	645.159	645.840

Sumber : Dinas Perindustrian Provinsi Jawa Tengah
Source : Industry Service of Jawa Tengah Province

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Underground Water Extraction and Land Subsidence

Groundwater is the water contained in the soil water bearing layers (aquifers) and is not covered by a waterproof coating. Underground water surface is strongly influenced by the season and the state of the surrounding environment. Inhabitants Semarang are located in the lowlands, many take advantage of this by making the ground water wells dug (shallow) with an average depth of 3-18 m. In the other hand, inhabitant highlands can only use wells in the rainy season with depths ranging from 20-40 m.

The rate of land subsidence in several locations in the area of Semarang is varied with a tendency to soil the greater the rate of decline from south to north (near the beach), where the rate of decline is the largest in the Port of Tanjung Mas. Land subsidence is the dominant factor that causes rising seas to land in Semarang because of sea level rise of 5.43 cm / year was recorded in Statiun Pasut Semarang, at 5.165 cm / year caused by land subsidence in the Statiun.
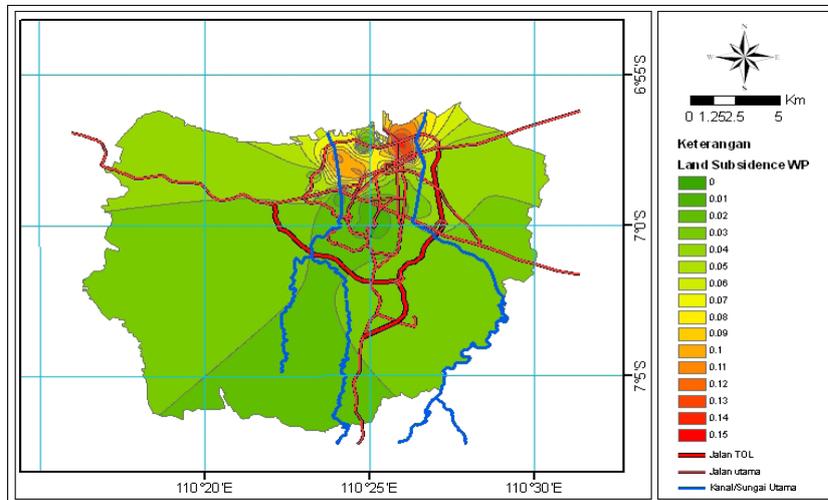

Figure 1: The rate of land subsidence measurement results Semarang
with a carpenter's level by FPIK UNDIP
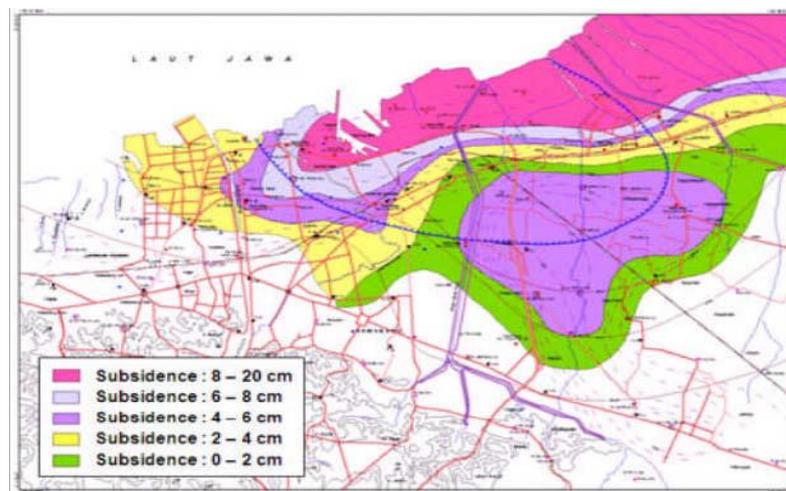(sources: Wirasatriya, 2005)

Figure 2: The rate of decline in the face of the ground Semarang measurement results with the
carpenter's level by the Center for Volcanology and Disaster Mitigation
(Source: Departemen ESDM, 2007)

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Taxation System in Holand
National Corporate Income Tax Rate at a Glance

Corporate Income Tax Rate (%)	25.5
Capital Gains Tax Rate (%)	25.5
Branch Tax Rate (%)	25.5
Withholding Tax (%)	
Dividends	15
Interest	N.A.
Royalties	N.A.
Branch Remittance Tax	N.A.
Net Operating Losses (Years)	
Carry back	1
Carry forward	9

Taxable Income

Dutch resident companies are subject to corporate income tax on their worldwide income. Furthermore, foreign companies, holding 5% or more in the issued share capital of a Dutch resident company could also become subject to Dutch corporate income tax on Dutch-source income. The latter only applies in case the corporate shareholder cannot benefit from any treaty protection.

4. Conclusion

Steps that can be taken by the government are to make the collection and recording of each offender database industry in Semarang. Then the government can make a classification of the database. By knowing the water needs of each industry, the government will determine number tax. There are several possibilities that can be applied, including:

a. The government makes a sanction and strict rules in the underground water extraction. Government could take higher taxes on industries that do the extraction of underground water. The results of such tax could be used as maintenance costs Banger Polder Project. In addition, the government also can make the classification is permitted to take the ground water. For example, a hospital.

b. Creating a local company that is able to manage the availability of clean water for the entire community. It is possible to do, because of Semarang is an area with a heavy rainfall and has a wide range of river.

c. Increase the source catchments to improve the condition of existing underground water in Semarang and prevent the number of water that is above the surface.

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