# The Usage of Strategic Environmental Assessment (SEA) Model in Land Use Policy: Case Study in Real Estate Development and Palm Oil Plantation in Indonesia

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**Keywords:** Land Use, Land Management, Strategic Environmental Assessment, Land Policy, Sustainable Development.

In land use policy, there is an evaluation tool called Strategic Environmental Assessment (SEA). The aim of SEA is to provide decision makers and affected stakeholders with timely and relevant information on the potential environmental impacts of either policies or permits to make it environmentally sounder (Jones et al, 2005; p. 6). SEA is the derivative method from Environmental Impact Assessment (EIA). SEA uses the social aspects rather than technical aspects in order to evaluate either the policies or the permits.

Sustainable development has three concepts namely environment, social and economic. SEA also focuses on these concepts. The International Association for Impact Assessment (2002) mentioned that SEA organizes the interrelationships between ecological (environments), social and economic impacts. This assessment will be used to analyze the permit, especially for real estate development and palm oil plantation case study towards the impact for the surrounding people. Furthermore, the analysis will be given to the policy maker for issuing the better permit in the future and maximizing benefit from the permit.

This paper tries to evaluate the real estate development in one city in East Java and Palm Oil Plantation in a Province in Kalimantan Island, Indonesia. The result from this paper is to get the policy evaluation in term of the sustainability-based SEAs in land use policy and permit. Sustainability based SEA means that SEA is used to evaluate the environmental, economic and social impacts, also affecting the local governments or benefit from the permit and to predict the bad impact from that permit.

## 1. INTRODUCTION

### 1.1 A Brief data of Indonesia

According to the potency of Indonesia, there are many statistic data that can be used for developing and managing this country. These data come from many ministries or government institutions. Recently, Indonesia comprises 34 provinces, 413 districts and 98 cities (Ministry of Home Affairs, 2013). The number of population is 237.641 million and dominantly, approximately136.620 million lives in Java Island or 57.49% from all populations (National Statistics Bureau, 2011).

As we explain above, the natural resources are including land, water and air. The total area of land in Indonesia is about 1, 91 million $KM^2$, generally separated in two main areas; forest area and non-forest area; those are like pseudo-barrier areas because the delimitation of the boundary is almost overlapping. Forest area is about 1 million $KM^2$ and non-forest area is about 0, 91 million $KM^2$. The focus of the National Land Agency, which has programs in land administration services, works in the non-forest area. The number of Indonesian's provinces administrative is shown in Figure 1.


Figure 1. Indonesian's Province Administrative (Ministry of Home Affairs 2013)

### 1.2 Backgorund of The Study

The transformation of land development is the very popular development process in Indonesia, but very critical in terms of both human security for local people and sustainable development. The government manages the land use and land availability while giving into public needs such as for Real estate development and big plantation. Land use must be preserved well either by the government or other stakeholders. Land develoment permit -Location permit- as the tool for land use aims to increase the investment and economic sectors in the city and rural. Furthermore, the government states that land use management will give economic benefits to the citizens.

Problem is how to manage and control the issuance of land use policy in order to make real estate and plantation such palm oil, rubber etc. This paper will evaluate the benefit from real estate development and big plantation for the environment and to the people surrounding the projects. Can the land development give significantly economic benefit such as employment and to

surrounding people? From those problems, this thesis can know the factors why local people sometimes still reject and protest to the local government about that land use policy. In this research, there is an evaluation with the sustainable development concepts. Sustainable development perspectives have three concepts: social, environment and economic. Those concepts will be evaluated with strategic environmental assessment (SEA) approach. After evaluating the indicators or criteria, this thesis gives some recommendations as the guidance for the policy maker to define a good policy regarding location permit (land development permit) and sustainable development issue especially in real estate development case and palm oil plantation.

### 1.3 The Objectives of The Paper

This paper has an aim to evaluate the land use policy regarding the real estat development and oil palm plantation in Indonesia. The researchers will focus on the case of a big real estate housing in one province which has many resistant from the surrounding people. This paper also describe about the impact of palm oil plantation to the environment and surrounding stakeholders. Some cities have many problems in developing the land area such as allocating space for housing, settlement, green open space for people and big farm area for increasing local people economy. The population explosion demands more area for housing which in turn decreased the public space such as the area green open space (IPB, 2007). In other sides, some areas also need very large areas for plantation. In sum, the land use change into housing development and plantation project needs to be controlled to make sure that the people's quality of life is given consideration.

Air pollution is one of the causes of global warming. Global warming has many potentially damaging impacts. An assessment of committed to and avoidable impacts would require the incorporation of potential emissions scenarios, dependent on human population growth, the efficiency of technologies, the rate of deforestation, land use and other factors (Adger and Brown, 1994: p.16). Land use change in urban areas is an important issue in climate change topic. Many lands have been changed for other purposes which contributed a negative impact on the environment such as conversion of rain forest into big plantation or open public space into shopping centre and real estate project. Furthermore, land use change has to be controlled for better allocation of the land allocation and in consideration of the environmental perspective.

Many land use changes have resistance from the public because such policies give bad effects on the environment. The regent or the city mayor issues the land use change policy without considering public opinion. Although some policies aim for additional income for the city, the location of certain establishments' location damages the environment. Land use change has to give to priority to environmental management so that the location permit does not give any bad influence on the environment and ecosystem. Finally, the government has to minimize the bad impact from the development and prepare the programme perfectly.

The autonomy system provides the local government the greater authority in managing their resources on their own. The local government has many resources that can be utilized for its development. These resources have to be managed to promote local development, fulfill the public needs, and increase the local income to support the local government programme.

One of the local resources is the land. Land plays a strategic role in the urban development especially in housing policy. Land, in other words, is also an economic commodity. The demand for land is always higher than the supply and the availability of land is a critical factor for

many development purposes in cities (Widodo, 2000:128). Furthermore, the local governments have serious effort to manage the land available for urban development. The land will be viewed as the most important component to support the urban development. The internal structure of cities has changed in response to the citizen needs. Alonso (1966:1) argues that no cities have grown in importance, many social sciences become increasingly concerned with them. The government has the responsibility to manage the land supply; land use and land use change because the availability of land is determined by many aspects such as politics, economics, cultures, society and environment itself.

## 2. LITERATURE REVIEW

This paper evaluates the land use policy with some theories regarding the sustainable development, land use policy and straegic enviromental assessment. Those theories will be used as the tools of evaluation of land use policy in a case of real estate development and palm oil plantation.

### 2.1 Basic theory of Sustainable Development

Development in all countries should pay attention towards achieving sustainable development. Sustainable development is a pattern of resource use that aims to meet human needs while preserving the natural environment so that these needs can be met not only in the present, but in the indefinite future (susdev.gov.hk, 2008). The field of sustainable development can be conceptually divided into three constituent parts: environmental sustainability, economic sustainability and sociopolitical sustainability.


Figure 2. Sustainable Development Parts (www.susdev.gov.hk, 2008)

Sustainable development is a concept for combining environment, economy and society in order to develop the area of nations. According to GSA Office of Government area Policy in 2000, sustainable development means integrating the decision-making process across your organization, so that every decision is made with an eye to the greatest long-term benefits. The efforts to build a truly sustainable way of life require the integration of action in three key areas, namely: economic growth and equity, conserving natural resources and the environment and social development.

In land management, the sustainable concept also can be used for controlling the land management policy from the policy maker. Land management needs to be managed well to avoid the negative impact for the people.

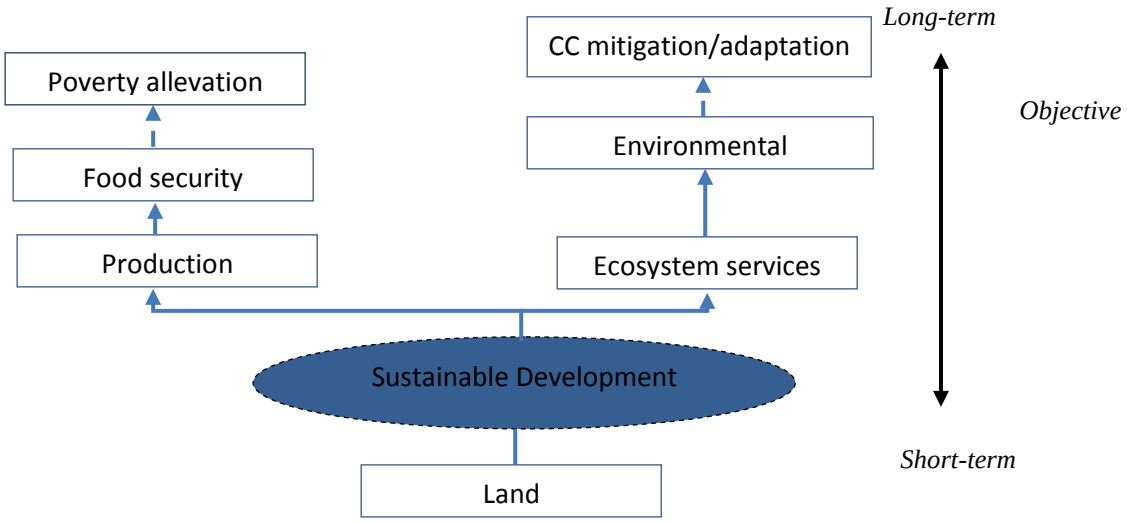



Figure 3. Sustainable Land Management Concept

## 2.2 Land use analysis

Land use change gives the different shape of land either partly or totally changing the classification of land. Land cover change fall into two types namely conversion and modification (Meyer and Turner, 1994: p.5). Lambin, Geist and Rindfuss (2006: p.4) state that land cover conversions compose the replacement of one cover type by another such as deforestation, agricultural expansion and in urban development. The modification types are the form of changes that affect the character of land surface without changing the classification totally (Lambin, Geist and Rindfuss, 2006: p.4). In short, the land use change creates the changing of classification of land, and it needs to be managed well in order to give benefit to the people and environment itself.

Instead of giving benefit to the people, the land use change often makes negative impact to the environment. Land use change has to be managed properly to give benefit to the people. Causes and consequences of land use change cannot be separated from the social, geographic, historical context and socio-economical issue. In sum, the land use change must result to socio-economic benefits and positive environmental impacts, especially for surrounding people from the location.

Land use change, especially in urban areas can sometimes cause the emergence of land conflict within the interest groups. Conflict over land may be conceived of as disagreement over the particular meanings embodied in the landscape: question about "what kind of place is this?" and "what kind of place should it be?" (Stedman, 2005, p. 122). It is very important to understand what the setting tools are to an individual or group rather than how much it means. In short, the people groups involved in land use conflicts actually aim to avoid the negative impact as well as maximize the benefits from the land itself.

## 2.3 Strategic Environment Assessment Model

This paper also uses Strategic Environment Assessment (SEA) for Land Use Planning and Land Use Change as the evaluation method and indicator in questionnaires. SEA provides decision makers and affected stakeholders with timely and relevant information on the potential environmental impacts of either policies or permits to make it environmentally sounder (Jones et al,

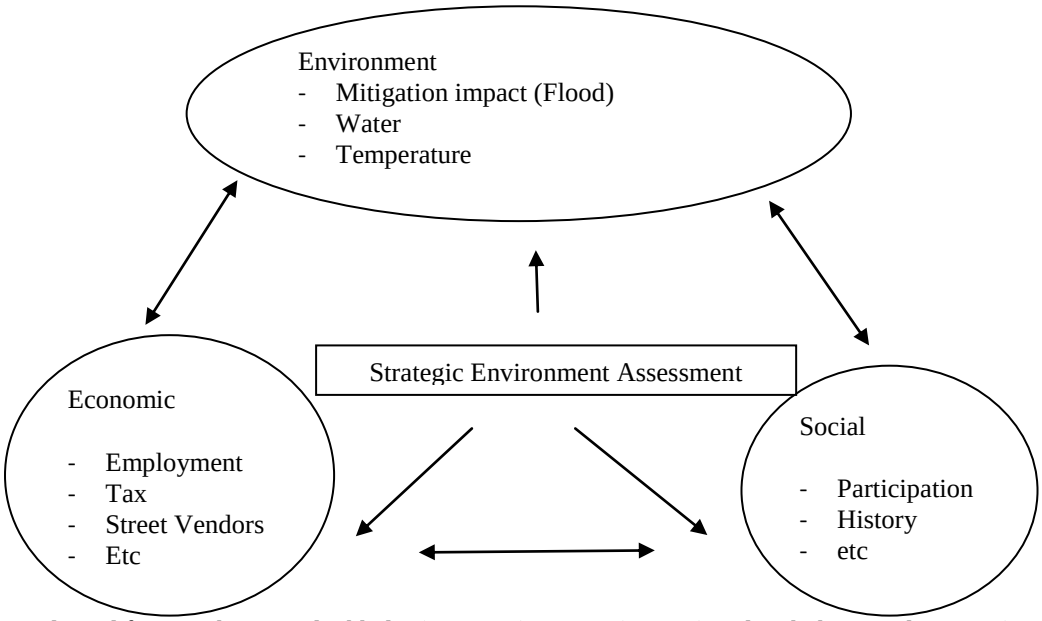
2005; p. 6). SEA uses the social aspects rather than technical aspects in order to evaluate either the policies or the permits (Miller and Pattasini, 2005; p.7).

There are several functions of SEA. Partidario (2005; p.152) states that SEA can assist planned decision making to:

a. Integrate environmental and sustainability issues in the policy making and planning processes;
b. Promote environmentally sound and sustainable development options;
c. Anticipate impacts that can occur at the project level, therefore, improving and strengthening the project or permit.

From the functions above, we can generalize that SEA includes the people's needs to ensure public participation, the permits or project monitoring and evaluation of the policy making process. SEA also addressed the integration of environmental and social issues for supporting the sustainable development target. In sum, the policy maker can use SEA for getting the better results possible with regards to future environmental and social impact from the issued permit or projects.

Sustainable development has three concepts namely environment, social and economic. SEA also focuses on these concepts. The International Association for Impact Assessment (2002) mentioned that SEA organizes the interrelationships between ecological (environments), social and economic impacts[1]. The result from this evaluation is to get sustainability-based SEAs in land use plan and land use permit. Sustainability based SEA means that SEA is used to evaluate the environmental, economic and social impacts or benefit from the permit and to predict the bad impact from that permit. Jones et al (2005: p.28) mention that there are three criteria namely system criteria, process criteria and outcome criteria.




Adopted from Nijkamp and Ubbels, (2005: 22), Harris (2000:5) and Nobukazo and Jae-un (2007:1)
Figure 4. SEA Model

[1] See Jones, Carys et al. 2005. Strategic Environmental Assessment and Land Use Planning. Earthscan. London. Pg. 1

## 3. THE CASES STUDY

This paper has two cases namely a Real Estate Development located in one region in Indonesia and the impact of palm oil plantation in Kalimantan, Borneo Island, Indonesia. Thoses cases will be scroutinized with related theories.

### 3.1 Real Estate Development in Malang City, East Java, Indonesia

#### 3.1.1 Administration and Geographic of Malang City

Malang City is located in 7°54'40" - 8°3'5" Latitude North and 112°34'13" - 112°41''39" Longitude East. There are five sub districts in Malang City, namely: Klojen, Blimbing, Kedungkandang, Lowokwaru and Sukun where divided into 57 villages and the area is 110.056 $Km^2$ (11,005.6 Ha). The border areas from Malang City are:

a. North side: Karang Ploso and Singosari Sub Districs (Malang Regency)
b. East side: Pakis and Tumpang Sub Districts (Malang Regency)
c. South side: Tajinan and Pakisaji Sub Districts (Malang Regency)
d. West side: Wagir and Dau Sub Districts (Malang Regency)

Malang City has higher land than other cities in East Java. The variety of declivity rate in Malang City is 3° - 15° in northern, central part and southern city and 5° - 15° in eastern and western city. This city is tropic area with two seasons namely rain season and hot season. Malang City has average temperature 24.13°

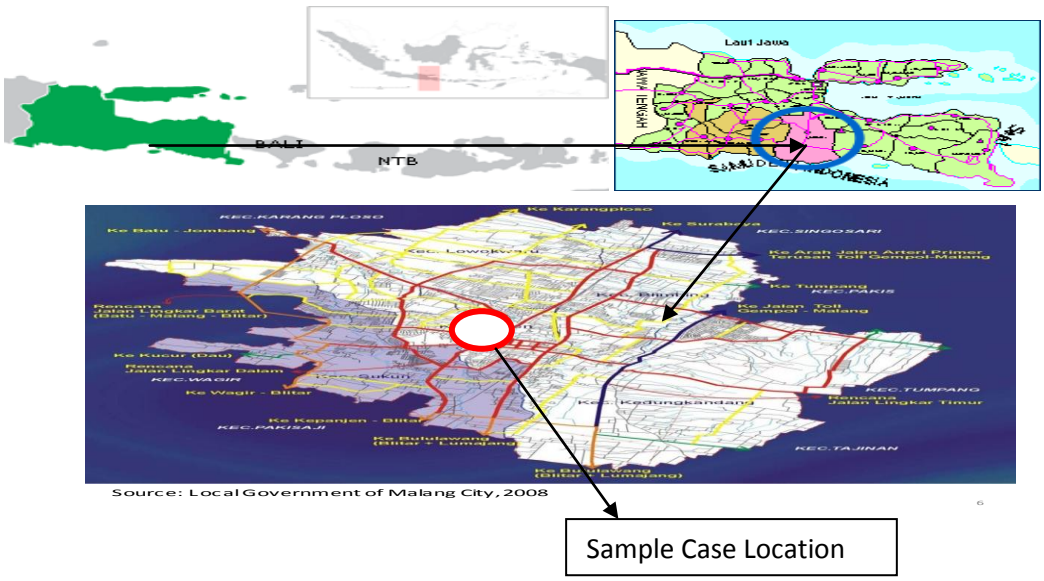



Figure 5. Picture of Malang City

#### 3.1.2 Land Use in Malang City

Malang city has area 110,056 $Km^2$ (11,005.6 Ha). Land use in Malang City has been divided into several functions. Land use in Malang City consists of farms, empty lands, housing and settlements, social facilities, office building, education, military territories, green open spaces, industries and warehouses, trade and service.

**Table. 1**
**Land Use in Malang City 2007 (Ha)**

| No | Land Use | Sub Districts | | | | | Total |
|---|---|---|---|---|---|---|---|
| | | Sukun | Kedungkandang | Klojen | Lowokwaru | Blimbing | |
| 1 | Housing | 1,051.6329 | 1,064.9832 | 575,6163 | 1,028.6784 | 840,7032 | 4,561.6140 |
| 2 | Sport field | 20.7725 | 4.4300 | 15.2078 | 10.0300 | 15.2575 | 65.6978 |
| 3 | Interment | 21.1996 | 20.7556 | 10.1410 | 28.1695 | 23.6974 | 103.9631 |
| 4 | Green Open Space | 1.5150 | 1.5664 | 9.6306 | 3.8450 | 2.1091 | 18.6661 |
| 5 | Recreation Centre | 0.3363 | 0.3484 | 4.4585 | 2.6700 | 0.0680 | 7.8812 |
| 6 | Rice Field | 342.3588 | 621.1824 | 0,0000 | 336.5938 | 197.8128 | 1,497.9478 |
| 7 | Dry Field | 287.2036 | 2,003.3222 | 0,0000 | 261.5588 | 101.8755 | 2,653.9601 |
| 8 | Plantation | 0,0000 | 0.2840 | 0,0000 | 0,0000 | 0,0000 | 0.2840 |
| 9 | Fishpond | 1.0500 | 0.2810 | 0,0000 | 0,0000 | 0,0000 | 1.3310 |
| 10 | Empty land | 85.1058 | 35.2364 | 42.8635 | 146.5046 | 187.5062 | 497.2165 |

Source: Local Board of Land of Malang City, 2008

Based on spatial zoning plan regulation of Malang City (2001), there are spare areas in Malang City that can be used for housing namely in empty land with area 1,801.231 Ha and farm area with 5,019.631 Ha (Housing and Settlement Development Plan of Malang City, 2004). According to Housing and Settlement Development Plan of Malang City (2004), farm land in Malang city is productive land which is to used only as the last alternative for housing development. In sum, unproductive land or empty land should be used as first priority for housing development.

### 3.1.3 The Real Estate Project in Green Space Area

The real estate project is located in green space areas. The company got the land from the government. They got the land from land transfer mechanism. In the past, many people came to that area for sightseeing, jogging and relaxing. The location was called ex-APP Land.

In 2002, the housing developer started to cut down many trees in ex-APP Land. Because of protests from the local people who living surrounding that area (Tanjungrejo and Bareng Village), the Mayor stopped that construction (2002). Local people protested to the local government because they had thought that permits could not be issued in that location. By using a permit, the housing developer seemed to have a right to changing the land surface into a real estate project.


Deforestation Activities in ex-APP Land in 2002,
Source: FORMAT, 2002

**Figure 6. The Land Conversion Started with Deforestation in 2002**

However, in 2006, the Mayor released again the location permit in that area so the housing developer can continue the real estate construction in that area. That permit has caused some local people who are living in Bareng and Tanjungrejo Village (FORMAT/*Forum Masyarakat Tanjungrejo*), academicians and NGOs to giving protests again to the Mayor. Those groups mentioned that the land use change in ex-APP land caused bad environmental conditions in the area surrounding ex-APP Land.

### 1. Flood Intensity

In order to get data about environmental aspect in that area, this research did in depth interview method to the local people group leader (FORMAT/*Forum Masyarakat Tanjungrejo*) and this research also gave the questionnaires to the local people from Bareng and Tanjungrejo Village to get the environment impact toward their environment. From 25 respondents, I got the data that 22 respondents say if the flood always comes in their environment after trees in ex-APP land were cut.

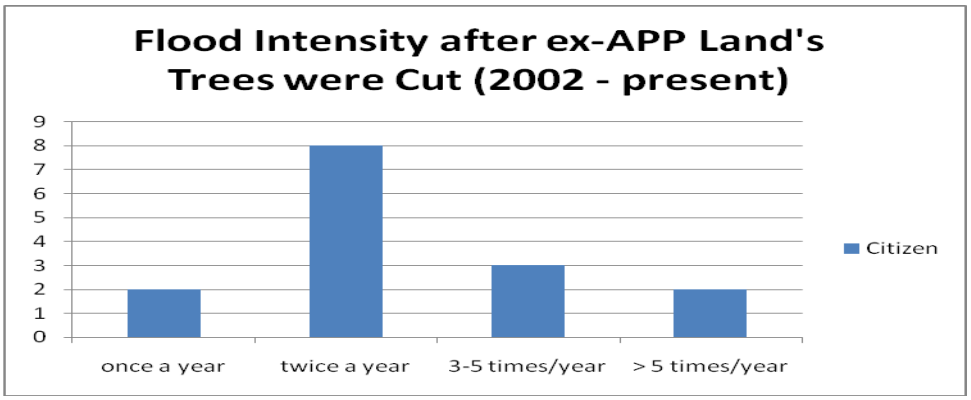



**Figure 7. Flood Intensity after ex-APP Land's Trees were Cut (2002 – present)**

### 3.1.4 Economy Impact from That Real Estate Project

Location permit is given to developers as the investment tool for the city. Location permit must give the economy benefits not only for the local government but also for the stakeholders surrounding the area where permit is given. Location permit in green area must give the economic benefit. However, that permit also caused the area of the green open space to decrease. Yet it is, urban green open space can also create economic benefit for the local people. Private sector wants to change the green open space into a real estate project. The local government issued the permit for enhancing the economic benefit from that land.

**1. Employment**

The real estate project in ex-APP Land has been officially constructing since 2006. The project was hoping to attract the employment for local people surrounding the location. I got the reasons that mostly they do not want to work on that location because they still reject the permit, they had a job and they not so confidence because they have low education degree. 24 respondents answer that they are not interested in working on that real estate project because they had a low education degree so they are not confident about being hired. The street vendors also prefer to be street vendor rather than apply a job in that area. They also said that they only graduated from low level school and they prefer to be street vendors.

**2. Land Tax and Retribution**

The main aim of location permits is to give the investment improvement to local government. In reality, investment rate from the Real Estate investor in that area cannot be calculated by the local government of Malang City. The tax sector is the **long term income** from the government so I just calculate from the tax which is paid until my fieldwork**.** The local government will get the land tax yearly after that real estate project finished and the buyer bought and lived in that place.

As the impact from location permit in the real estate project, the local government gets the tax from the housing developer. According to Land Office of Malang City, the housing developer said they will divide the land into 105 parcels of land. From each parcel, the housing developer must pay tax to the government. The housing developer came to the Land Office of Malang City and said they want to divide the land into 105 parcels. From this process, the housing developer will know the area of each parcel. The resulting tax called Land Area Calculation and Mapping Fee.

**3. Influence to Street Vendor**

Before the trees were cut by the housing developer, many people came to the that land either for picnic or for leisure so the street vendors could get customers. In sum, the street vendors did not get any benefit from the land conversion in that area. A relocation issue has emerged after the land use change process was started. The street vendors heard this issue after thatland was owned by the private sector. 11% respondents say that they worried that real estate project will make the local government relocate their place. The local government of Malang City will make some plans for reform the street vendors surrounding ex-APP Land. But until now, they have not decided the format yet. The street vendors never get clearer information from the local government. They only get the information from the street vendors' group and their friends about that issue.

### 3.2 Palm Oil Plantation Effect for West Kalimantan, Indonesia

3.2.1 A Brief Data of Palm Oil Plantation in Indonesia

Plantation is one of the biggest income for Indonesia. Many big plantation have been growing since the dutch colonial period. One of them is palm oil plantation. Indonesia has palm oil plantation area 7.2 million Ha which creates crude palm oil (CPO) as the good commodity from palm oil (Rahayu, 2010). Every year, Indonesia produces 19 million tons of CPO and it makes Indonesia as the biggest producer of CPO. From the table below, we can see the Indonesia's palm oil production gives big contribution to the total of world palm oil consumption percentage.

| Countries | Aug-07 | Sep-08 | Oct-09 | Nov-10 | Nov-11 | Dec-11 |
|---|---|---|---|---|---|---|
| Indonesia | 44 | 47 | 48 | 49 | 50 | 50 |
| Malaysia | 43 | 39 | 39 | 38 | 37 | 37 |
| Thailand | 3 | 4 | 3 | 3 | 3 | 3 |
| Colombia | 2 | 2 | 2 | 2 | 2 | 2 |
| Nigeria | 2 | 2 | 2 | 2 | 2 | 2 |
| Other | 6 | 6 | 6 | 6 | 6 | 6 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

Source: Ambiyah: 2012, 36


Figure 8. Palm Oil Areas in Indonesia

The palm oil very valuable in market share because it can be used as cooking oil, margarine, shortenng, and many other products such as soap, shampoo and cosmetics. Besides those household products, CPO also can be utilized as industial uses such as material in metal processing.

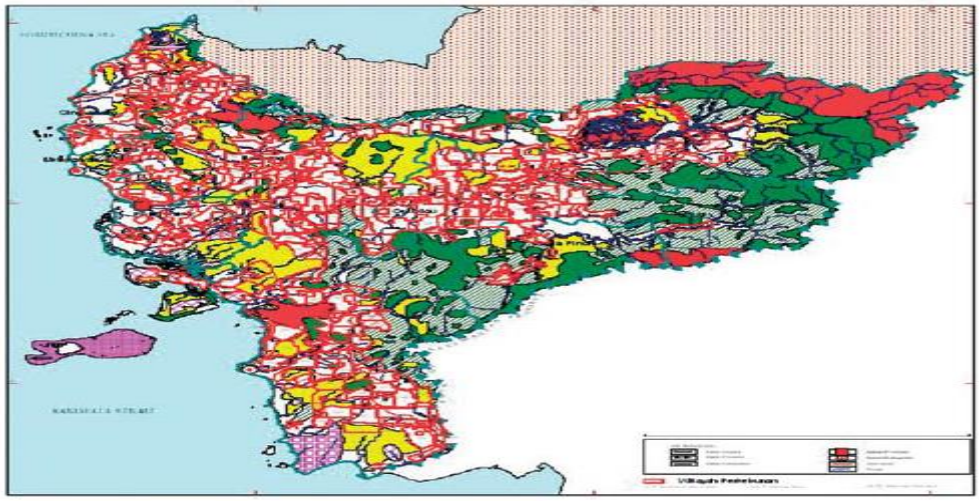
The difficulty to make palm oil project is the avaibility of land. Most the plantations are established on state lands. Sometimes, the bad companies do illegal logging to create new land for planting. The companies need hugh land for running their business. After making the planning within the companies plann business, the companies must get the permit from the government.


Source: Sirait, 2009: 32

Figure 9. The Cycle Of Palm Oil Plantation Planning Process

3.2.2 Palm Oil Plantation Condition in West Kalimantan

West Kalimantan is a province in Kalimantan Island which has a lot of space areas for palm oil plantation. According to Sirait (2009:8), West Kalimantan is planning to expand palm oil plantation by five million Ha, more than any other porvinces. Non productive land is the targeted land for conversion to palm oil plantation. The area of palm oil plantation in West Kalimantan can be seen form the figure below:



Source: Sirait, 2009: 8

Figure 10. The Area of Palm Oil Plantations in West Kalimantan Province up to 2006

From the figure above, we can see that many area in West Kalimantan are utilized as palm oil plantation besides for other crops. This plantation also increases many income for that province.

The palm oil plantation creates many jobs for local people. Many regencies in West Kalimantan get a lot of income and jobs from palm oil plantation. We can see the number of workers from the table below:

| Regencies | Area of Palm Oil Plantation (Ha) | Number of Production (Ton) | Number of Workers/Farmers (per family) |
|---|---|---|---|
| Pontianak | 5,827 | 437 | 368 |
| Landak | 38,403 | 59,25 | 5,279 |
| Sambas | 60,262 | 41,147 | 7,452 |
| Bengkayang | 51,762 | 32,776 | 3,559 |
| Singkawang | 6,117 | 1,925 | 112 |
| Sanggau | 161,433 | 302,745 | 30,495 |
| Sekadau | 65,325 | 90,519 | 12,084 |
| Sintang | 78,053 | 104,678 | 11,288 |
| Melawi | 21,162 | 29,319 | 3,202 |
| Kapuas Hulu | 35,220 | 15,710 | 1,510 |
| Ketapang | 265,485 | 260,283 | 16,891 |
| Kayong Utara | 24,992 | 4,893 | 0 |
| Kubu Raya | 44,536 | 23,944 | 762 |

Source: Indonesia Investment Board of West Kalimantan, 2011

From the tabel above, we can see that palm oil plantation can give benefit to local people becoming workers and farmers in palm oil industry.

3.2.3 Side Effect of Palm Oil Plantation

Palm oil plantation has side effect – notorious way- for one area. The companies which running in this business usually that company has big capital and strong networking. They can generate not only possitive effect but also negative effect. Many side effects can occur form this industry namely illegal loging in order to create space for plantation, waste from CPO factory, and bad land use change for palm oil. Other issues are raised when an oil palm plantation is built around an indigenous people. The plantation owners will generally take over the land and make an agreement that small farmers can still use the land, but the companies will burn any crops planted in that area to develop the plantation. This creates the gap between the local people and plantation owners, to only further add insult to injury by requiring the people to work on the plantations doing hard and dangerous work for little wage. In West Kalimantan, many people live in surrounding location of palm oil plantation. They can be employed as the workers of the companies. That model is one of the ways to minimize the confilct in that area. The companies should give the possitive impact to the local people and surrounding area – environmental impact -.

## 4. ANALYSIS OF SUSTANAIBLE ENVIRONMENT ASSESSMENT (SEA) APPROACH

### 4.1 The Solution of Real Estate Development Case

Some local people and street vendors in the surrounding area from real estate development still reject the development and protest to the local government. Data shows that 50% of the respondents (local people and street vendors) protest against the land use change because of its environmental impact. The other respondents reject the permit for historical reasons, relocation issues and because of the reduction of urban green space. There are three sources of conflict in surrounding the project namely environmental, economic and social (sustainable development concept). According to Scott Campbell (1996; 298), the local government as the local planner must concern itself with

the stakeholders interests so the permit will give benefit to all stakeholders in that area. From the data, those sources of protest can be depicted into following figure:

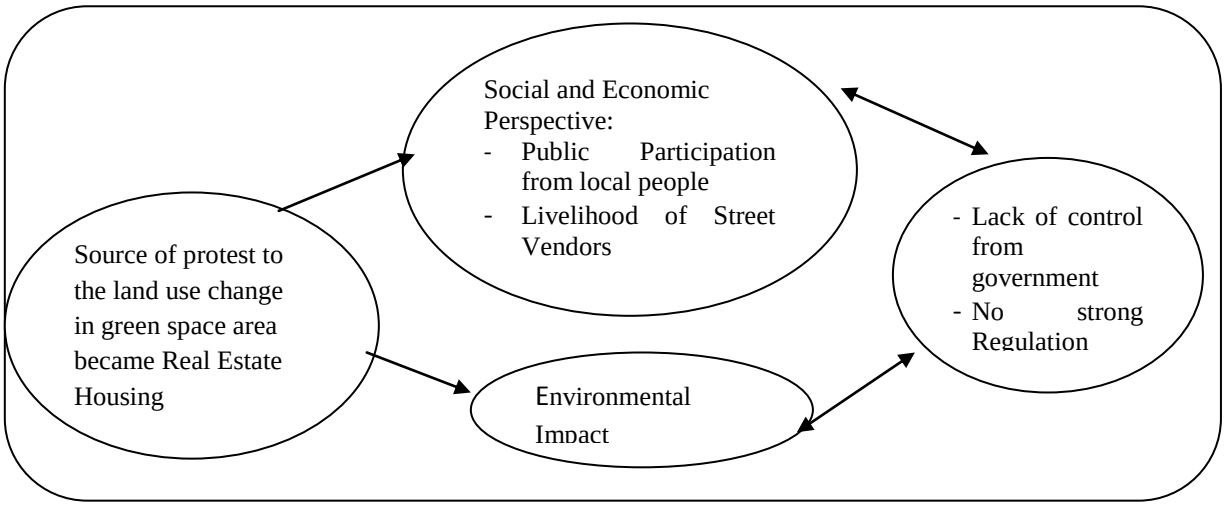



**Figure 11 The Sources of Protest and Conflict in Real Estate Area**

The figure above shows us that prior to issuing the location permit, the local government did not give the opportunity to the public to participate. Environmental problem also makes local people protest and reject the permit. The local people still reject and protest against to the local government because that land use change has been having a negative impact to the environment and the basis for livelihood. Floods, hot temperatures and the difficulty in getting well water became the problems after trees were cut by the developer.

**1. Environmental Impact for Surrounding Area**

Floods, hot temperatures and the difficulties to get well water are the negative environmental impact for local people in surrounding area. Based on the questionnaires, flood happens twice a year in closest villages. There are other disadvantages for the people when the floods occur. The household devices often cease to function because of the floods. Local people have also difficulty getting well water after the trees were cut by the developer. They have to buy clean water for daily life. Some of them have bought a new water machine for getting the good water from deep underground. The local government must take action quickly for solve their environmental problem. Floods must be controlled and the local government must encourage the developers to participate in solving this problem. In sum, they have to work together for designing solutions for addressing the above problems.

**2. Local People and Street Vendors Livelihood**

The street vendors surrounding the land also reject and protest against the change in land use of the ex-APP land. The protest is linked to their income and livelihood. The income of street vendors in surrounding land area has been decreasing since the trees land were cut as only a small number of people visit the area. The street vendors only get their income from selling in that area. Besides that, the street vendors also worry that they will be relocated to other places. The relocation issue must be solved by the governmentThe government must invite the housing developer and the street vendors together to communicate or to discuss the plan to increase the income and improve

livelihood for the street vendors. The government has to stimulate the developer to participate actively in order to support the street vendor's interests (improving their shop and supporting the financial)

The employment of local people also has to get attention from the local government. The local government should stimulate the housing developer to employ local people in their real estate area or in the future development of real estate areas. The local people must get the first priority in order to give economic benefit to them. Based on the employment data of local people, there are many people who are still unemployed and work as menial labour or small vendors. These people can be employed by the developer or hired for the next development project or for work in local facilities.

SEA is used to get the data and answers from the respondents (local people and street vendors) in order to evaluate the location permit as the land use change tool in that area. There are some criteria that had been used in questionnaires. By evaluating those criteria, this thesis gives a recommendation to the government in issuing location permit in the future.

**Table 4.1**
**Evaluation of SEA of Land Use Change and Planning in Issuing and Monitoring Process of Real Estate Development.**

| No | Criterion | Criteria met | Comments/Findings |
|---|---|---|---|
| **1** | **2** | **3** | **4** |
| **Outcome Criteria** | | | |
| 1 | Employment | ◊ | there are no respondents working on that real estate area |
| 2 | Tax | ▲ | the local government only received small income from the developer because the real estate is still under construction |
| 3 | Street Vendors (Small Business) | ◊ | Since the trees were cut down, the street vendors income have been decreasing because only small number people visit the area. |
| 4 | Land Price in surrounding Location | ▲ | Some respondents said that they land prices are getting higher but most respondents said that there is no influence to their land price |
| **Process Criteria** | | | |
| 1 | Flood (Mitigation) | ◊ | Floods occurred in respondents area since the ex-APP land trees were cut |
| 2 | Monitoring | ◊ | No monitoring from the local government agencies to the location permit holder |
| 3 | Recreation (Leisure) | ◊ | In the past, that area was a place for leisure activities for local people. |

| System Criteria | | | |
|---|---|---|---|
| 1 | Socialization from the government before issue the location permit | ▲ | the local government had not given the proper information prior to issuing the permit |
| 2 | Socialization to the street vendors if they will be moved to other locations or just improve their place/shop | ◊ | There is no information about either street vendors' relocation or street vendors place/shop re-formation. |
| 3 | Coordination/integration among the local agencies in order to control the permit | ◊ | Lack of coordination in order to monitor and control the project |

Notes: ■ = Yes
▲= Partially
◊ = No
Source: Carys Jones et al, 2005 and Fischer, 2007.

Table above shows that based on the SEA evaluation, the policy from the government that gives the companies to build the real estat development has many weaknesses in land use planning policy and gave disadvantages to local people. The lack of public participation and limited control from the government over location permit holder are the main problems from SEA evaluation.

### 4.2 SEA Approach in Palm Oil Plantation Industry in West Kalimantan.

Palm oil industries create many advantages to the country. Their contribute to increase the country income and reduce the unemplyment problem. In the sustainable manner, palm oil fruit has a big support to the bio-fuels industry (World Growth, 2011: 8). Investment in bio-fuels processing is increasing; the government has policies to develop the bio-diesel industry. Indeed, it stimulates many jobs and reduce the unemployment.
The government tries to make the palm oil industry can give the possitive impact not only to the people but also to the environment. Based on SEA model, the government should concern to three parts namely: social, economy and environment . As we discuss before that the industries can create the negative effect such as land use conflict and people migration so the government is also responsible for reducing the conflict and they must guarantee for the local people food sustainability.

Economy reason is the first approach from the SEA Approach in palm oil plantation. The local governments in West Kalimantan want to give the value added for the local people surrounding the project. Based on Sirait (2009:7), the local governments in West Kalimantan, have issued regulations on partnership schemes for palm oil plantation. These mechanisms usually based on the model of *plasma-inti*, whereby the plantation company manages the group of the land and stimulates an out farmer or plasma scheme with local groups usually getting less than two Ha per family. This is one of The SEA Approach, that there is an obligation for the big companies to help the local communities to develop their land with the companies support.

The SEA Approach also sees the land use policy from the social aspect. The palm oil industry must concern about the social conflict – land use conflict- between the companies and the local

people. The land use conflict can be emerged as a big problem when the ompanies do not concern to the customary law from the indigenous people right. In West Kalimantan, the biggest tribes who lives surrounding the plantation area Dayak and Melayu. Many land disputes have been rised because the companies do not concern to the customary right of communal groups. Dayak and Melayu ethnic groups get limitation for manage their ancestral lands because of palm oil land use. The companies get the permit from the government and they make border srounding the location so the ethnic groups cannot get the natural crops for their food or wood from the land. Nowadays, before the government issue the permit, the companies should make a social program – such as corporate social responsibility- planning for giving the sustainability to the local ethnic groups.

The palm oil sector is having serious problems regarding the environment. Many environmental problems have been rising since many palm oil industries established such as conversion of natural forest, destroying habitats, illegal logging and the newest issue, global warming. Based on Ambiyah (2012, 70) and Lord and Clay (2007) research, the palm oil plantation environmental impact is classified to four types namely : environmental impact to air, water, land and habitat conversion. Lord and Clay (2007) mentioned that water condition has been polluted from teh usage of pesticides and other agrochemicals and other dangerous things. Palm oil plantation causes environmental problem such as soil erosion. Ambiyah and Gastra et al (2002) have also found that the plantation in West Kalimantan has caused deforestation thorugh fires and burning practices. The impact comes from the conversion of habitat cause many loss mammals per hectare than tropical forest. The local government as the local authority has a duty to monitor the security of processing of plantation so that it can reduce the environmental impact to surrounding location.

## 5. CONCLUSION

Sustainable development and land use policy have close relationship. Sustainable development has three parts namely ecological (biodiversity), economic and social aspect. The economic target is not only the aim from the land use policy. The actors in land use policy such land use for real estate development and palm oil plantation, however, cannot ignore the other aspects namely environment and social perspective.

Policy evaluation especially in land use policy is not only about data collection but also requires decisions about what action will be taken if the execution or implementation deviates unduly from what is desired. By using the policy evaluation, the policy stakeholders can analyze the impact from the policy either to avoid the bad impact or to solve the problem from the policy implementation. Finally, policy evaluation plays important role in the public policy analysis for giving the good contribution both to solve the current problem and to inform some data for the policy maker in making the good policy in the future.

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