



**THE EFFORTS OF LOCAL GOVERNMENT IN ACHIEVING
SUSTAINABLE AGRUCULTURE AND COMMUNITY EMPOWERMENT
IN MALANG REGENCY, EAST JAVA, INDONESIA**

THESIS

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**DOUBLE DEGREE MASTER PROGRAM
FACULTY OF POLITICAL SCIENCE AND LAW
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ORIGINALITY STATEMENT OF THESIS

I declare in good faith that based on my knowledge, there is no other manuscript of thesis to be asked in order to obtain an academic degree at any university or other institute of tertiary education, and there is no work and opinion ever written or published by the others, except citation written in source of citation and reference.

Malang, June 14th, 2013

IKE ARNI NOVENTI



For my beloved Mom and Dad,
SUPARTI and SUNARDJI

FOREWORD

Alhamdulillahirobbil'alamin, with His guidance and mercy, I can accomplish this study and research entitled "THE EFFORTS OF LOCAL GOVERNMENT IN ACHIEVING SUSTAINABLE AGRICULTURE AND COMMUNITY EMPOWERMENT IN MALANG REGENCY, EAST JAVA PROVINCE, INDONESIA". In addition, I would like to express a very genuine gratitude and appreciation to:

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Abstract

Sustainable agriculture development is a sustainable development approach in the field of agriculture sector which requires the economic, social, and environmental aspect to be considered equally in order to ensure the next generation's ability in fulfilling their needs. This approach is implemented to answer the degradations both in terms of natural and social caused by the implementation of green revolution, an agriculture development approach which only emphasize on increasing economic aspect only without considering social and environmental aspects. This approach has a close relation to farmer empowerment where the farmer as the main actor in agriculture sector needs to be developed in order to increase their human resource quality and also to be more independent. This research is conducted with the purpose is to know whether the agriculture development programs that has been conducted by Local Government of Malang Regency has supported the practice of sustainable agriculture development in this regency and also has led to farmer empowerment.

This research uses qualitative method with descriptive approach in determining, collecting, and processing the data. The result of this research showed that most of the agriculture development programs that conducted by this local government more emphasize on the implementation of non-sustainable agriculture development. In addition, the green revolution is still implemented in this regency by using more chemical input to increase agricultural production than using organic input that can preserve the nature. Furthermore, there are still many agriculture development programs that did not led to farmer empowerment, even had a high potential in increasing farmer's dependency toward local government by giving many grants than providing transfer of knowledge activities. The implementation of sustainable agriculture in this regency has supported by several factors such as clear legal frameworks and sufficient infrastructures. However, there are also many factors that inhibit the implementation of sustainable agriculture development in this regency such as lack of governmental employee's commitment and knowledge, also cooperation among them; and also socio-cultural of the farmers.

Agriculture development in Malang Regency is not sustainable and also do not empower the farmer community. Moreover, most of agriculture development program conducted by this local government come from central government. Local Government of Malang Regency should be more creative in formulating agriculture development programs which can answer the problems and needs of farmer community. In addition, this local government needs to strengthen the cooperation and coordination among all related local governmental working units in order to be able to formulate and implement sustainable agriculture development and community empowerment programs properly.



Keyword: Sustainable Development, Sustainable, Community Empowerment,
Agriculture Development, Indonesia



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CHAPTER I

INTRODUCTION

This chapter provides the background which explains the reasons of the researcher for choosing this topic. Therefore, this chapter will be divided into five parts, namely: Research Background, Research Questions, Research Purposes, Research Benefits, and Research Structure. The first until the third part aims to explain briefly about the reason and the importance of the research. The fourth part aims to explain the practical and theoretical contribution of this research, while the last part briefly explains the composition of this research.

1.1. RESEARCH BACKGROUND

Development is a process toward prosperity and should always be done and also one manifestation of the willingness and ability of a state to be more developed to the more advanced. Development is essentially a dynamic process that is to get to the stage a better life. Also, a development characteristic is a multi-dimensional nature and multi-disciplinary. For that, the construction of development is carried out in various areas of both economic, social, cultural, political, defense and security, and so forth.

According to Bintoro Tjokkroamijojo, et al. (1982:1), "Development Concept is not a static concept continuously changing" shall mean the development is an orientation and business activities without end. The definition of development must be viewed dynamically, and not seen as a static concept. Development should follow the times and focus on improving the quality and level of community life, so that is better than a previous state. Moreover, development



should be able to overcome the problem of poverty is not only made the problem of poverty becomes more severe.

Development concept basically aims to improve the welfare of citizen.

Development, according to several economic development literatures is, often defined as a continuous process of increase in real income per capita by increasing the number and productivity of resources. This view led to the concepts of development as economic growth. One of new economic growth theories argues that investment in human resources through education and training and improving health status have a major impact on improving productivity (Becker, 1964 in Xiao, 2001:1-2). Economic development is aimed to improve the living conditions and welfare of the community. It is expected to be able to achieve better welfare. One of development practice in the economic field is carried out through development in the agricultural sector.

Along with the concept of economic development, an agriculture development has objectives to fulfill human necessities and to achieve welfare by increasing productivity and using resources efficiently. To achieve these objectives, William Gaud, a former USAID director, introduced Green Revolution in 1968. The Green Revolution is based on four pillars: the provision of water through irrigation systems, an optimal use of chemical fertilizer, the application of pesticides in accordance with the level of pests attack, and the use of superior varieties for quality planting materials (Evagrowth, 2011:1). Actually Gaud had started the revolution in Mexico by changing its agricultural system radically, on 1945 with the support from the Ford Foundation, the Rockefeller Foundation, and some other big institutions. One of the reasons is the inverse proportion of population growth and production capacity of wheat. Population grows during the



time, while, wheat production was decreasing. The facts proved that Mexico which was initially imported wheat in 1943, in 1956 Mexico could fulfill her country needs; moreover Mexico also exported wheat to other country.

Those big changes indicated that they successfully run the program, so the Ford Foundation and the Rockefeller Foundation brought the same technology to other countries which were focused on Paddy, including Indonesia.

Indonesia was starting to implement Green Revolution in 1970's through *Panca Usaha Pertanian* (PUP) by founding some chemical fertilizer industry, agricultural tools production, and founding of pesticide industry, using superior variety of paddy called **International Rice** (IR), and also giving credit supply to farmer.

Based on the history of green revolution, it can be defined generally that green revolution is a modern agriculture development policy to answer food requirement with improving food production by synthetic fertilizers and the other chemical elements (Widiarta, et al., 2009:299).

As Mexico, Indonesia was also succeeded in running this program and has brought Indonesia to an improvement of food agricultural productivity sector and in 1984 Indonesia was considered as a food self sufficiency country. The Green Revolution brought Indonesia into big changes, included farmer characteristics that moved from anti-technology to used-technology.

However, in Indonesia, the green revolution also brought negative impacts such as environmental degradation and dependency of the farmer on the government for further agricultural development (Widiarta, et al., 2009:297).

Moreover, until the present time, most of the farmer in Indonesia is still dependent to the chemical fertilizer from the government, while the price becomes high; this condition makes the farmer become poor time by time. Green



revolution technologies and techniques, including the use of synthetic chemical fertilizers and pesticides through time, have revealed their negative impacts such as extinction of hundreds of local variety of paddy, various soil fertility organism are destroyed, declining soil fertility, soil and agriculture product contain pesticide, water and soil pollution, balance of ecosystem are damage, and also explosion of attack and amount of pest, even new kind of pest.

The negative impact of Green Revolution was felt by all countries who implemented this program. In this situation, there was conflict of interest between economist with the major aim to improve welfare by maximizing productivity, and ecologist with the major aim to protect and maintenance of ecosystem resilience and natural conservation. The deep conflict between achieving welfare and maintaining environment led to the emergence of sustainable development concept with its dual emphasize on development and environment. In addition, agriculture sector has become one of the major areas of sustainable development. From this view, the concept of Sustainable Agriculture was born.

The concept of Sustainable Agriculture Development has aimed to increase agriculture productivity along with natural conservation and achieve the healthier life and environment. For some countries which implemented Green Revolution, this concept is used to respond the previous development strategy which focused on the objective of high economic growth through implementation of the green revolution that proved have caused degradation of production capacity and quality of environment. This concept has been implemented by almost all of the countries in the world and also has been included in the national development programs, including Indonesia.



There are varieties of government efforts to implement sustainable agriculture development including through the formulation of policy. In Indonesia, this concept has been conceptually accommodated in Law no.12 year 1992 concerning cultivation of plants. The law explains that the agriculture development in Indonesia is sustainable development and environmentally sounds. This means that agriculture development in Indonesia is aimed to improve the community welfare and should also consider to the environmental impacts that might arise. The agricultural development should be in harmony with the environment, which means that the agriculture development should not impact negatively on the environment. In addition, to the Act, it artifacts some supporters of legislation that facilities the implementation of sustainable farming systems, including the President Instruction No.1/2008 concerning Rice Policy, Law No.41/2009 concerning Protection of Sustainable Agriculture Land, as well as a policy of creation "Eternal Food and Agriculture Land".

In addition, the government's efforts in developing sustainable agriculture is also done through the strengthening of capital such as people's business credit, fertilizer subsidies, and a lending capital for farm management, an institutional strengthening such as Primatani formation, a formation of farmer groups, and also an enhancement of human resources through education and training, and developing areas that are less fertile through the Village Independent Energy program.

Although every effort has been done by the government in developing sustainable agriculture, but agriculture conditions in Indonesia are still alarming. Agriculture conditions in Indonesia are still experiencing some problems, both in the terms of quality and quantity. According to Iswandi Anas, a professor of soil



biotechnology of Bogor Agriculture Institute, Indonesia, almost 75% of agriculture land in Indonesia is in critical condition because of declining soil fertility which is caused by the use of high concentration of chemical fertilizer in high doses and longtime period continuously (Adlin, 2011:1). In addition, approximately 50% of forest land in Indonesia is in damage and critical condition (metrotrvnews.com, 2011). In terms of quality, declining of the number of agriculture land in Indonesia has become greater. It is caused by the high rate of conversion of forest land and non-oil palm plantations into oil palm plantations, as well as the high rate of conversion of agriculture land into non-agricultural land. Based on the data from Central Bureau of Statistics, raw land in 2002 still reached 7.748.840 hectares, but in 2011 only remained about 6.758.840 hectares.

In the other hand, the dependence of farmers, as the main subject and implementer in agricultural practice toward the governments is still very high. This can be seen from the lack of initiative of farmers in the development of agriculture lands, in the provision of fertilizer, an irrigation management, and a compliance with seeds. The high level of dependency on government is also seen at the high level of their dependence on the field extension workers. Therefore, the agricultural development in Indonesia should be more focused on empowerment.

In essence, the concept of empowerment as an alternative concept of development is giving advantage to the autonomy of decision making from a group society, which relies on personal resources, through participation, democracy, from social learning through direct experience (Friedman, 1992 in Laverack, 2001: 179). The focus point is a matter of locality, because civil society will be better prepared to be empowered through local issues.



Empowering community is the most important thing in the development of agriculture sector. It will increase the capacity and capability of farmer community as the main actor in development of agriculture sector. By increasing capacity and capability, the farmers are able to manage their farm land properly and increase the agriculture production that automatically also increase social welfare of the farmer.

Therefore, in this research, the researcher would like to know about the efforts of local government in achieving sustainable agricultural and whether those efforts have led to community empowerment. In addition, the researcher also would like to know the supporting and inhibiting factors faced by local government in achieving sustainable agriculture.

1.2. RESEARCH QUESTIONS

Based on the background above, the formulations of a problem that can be drawn are as follows:

1. Do the efforts made by the Local Government of Malang Regency East Java, Indonesia in developing agriculture sector support the practice of sustainable agriculture and lead to community empowerment?
2. What are the supporting and inhibiting factors for Local Government of Malang Regency, East Java, Indonesia in achieving sustainable agriculture?

1.3. RESEARCH PURPOSES

Based on the research question above, the goals to be achieved in this research are:



1. To explain and analyze whether the efforts of the Local Government of Malang Regency in developing agriculture sector has supported the practice of sustainable agriculture development and led to community empowerment.
2. To explain and analyze the supporting and inhibiting factors for Local Government of Malang Regency, East Java, Indonesia in achieving sustainable agriculture.

1.4. RESEARCH BENEFITS

Contributions are expected from this research are as follows:

1. Practical Contributions
 - a. As a contribution to the local government and other sectors that associated with empowerment and sustainable agriculture development.
 - b. As a material consideration for the local government especially the Department of Agriculture and Plantation and other related departments in Malang Regency, East Java, Indonesia to formulate and maintenance a better empowerment and sustainable agriculture development programs.
2. Theoretical Contributions
 - a. To provide an empirical contribution to development of science particularly in Politics and Public Administration.
 - b. As a material reference that can be used by other researchers to develop further studies that related to this research.



1.5. RESEARCH STRUCTURE

The writing of this thesis consists of six chapters which is set between chapters of each other. The systemization of writing this is as follows:

1. Chapter I: Introduction

In this chapter explains a few things including the background, the formulation of the problem or research question, research purposes, contributing research, and systematic discussion.

2. Chapter II: Literature Review

This chapter describes the literature review/ study of the theory relating to the object of research.

3. Chapter III: Research Method

This chapter describes the research methods used in the writing of this thesis. Because the method used is qualitative research methods with the descriptive type of research that will be described in this chapter include a focus of research, data collection techniques, and the type of analysis used.

4. Chapter IV: Social Setting

This chapter describes the phenomenon and condition of research site.

5. Chapter V: Result and Discussion

In this chapter contains the research data, data analysis, and interpretation of data.

6. Chapter VI: Conclusion and Recommendation



CHAPTER II

LITERATURE REVIEW

This chapter provides related theories and previous in order to support and strengthen the background of this research. Moreover, this chapter also provides theoretical framework in order to help the readers in getting the research focus and the whole idea of the researcher concerning this research easily.

Briefly, this chapter explains some theories such as sustainable development theory including the concept of sustainable agriculture development and empowerment theory, also provides the development paradigm shift in order to show the importance and history of sustainable development.

2.1. PREVIOUS RESEARCHES

There are several researches related to sustainable agriculture development in the world. It can be seen in table 1 below:

Table 1

Prior Researches

No	Title/ Writer/ Year/ Volume	Conclusion
1	Basic Principles of Sustainable Development Jonathan M. Harris/ 2000	- Approaches of development theory always move along with the displacement of human and nature needs, and can be divided into some period of times as follows: a. Colonialism era (before 1945): little provision of economic and social advance, exploitation of



*Global Development and
Environment Institute
Working Paper 00-04,
Tufts University, USA*

raw materials and cheap labour.

b. By the end of 2nd World War (1945): industrialization and economic growth, little focus in social and political issues.

c. 1960: economic development with the main focus on raising living standards, providing steadily more goods and services to an expanding population.

d. 1970: fulfillment of basic needs with the main focus on education, nutrition, health, sanitation, and employment for the poor.

e. 1980: structural adjustment, including liberalization of trade.

f. 1987: sustainable development with the focus on economic growth, social development, and environmental conservation.

- Sustainable development has three aspects and emphasizing on each aspects as follows:

a. Economic: produce goods and services on a continuing basis, to maintain manageable levels of government and external debt, and to avoid extreme sectorial imbalances which damage agricultural or industrial production.

b. Social: must achieve distributional equity, adequate provision of social services including

	<p>health and education, gender equity, and political accountability and participation.</p> <p>c. Environmental: must maintain a stable resource base, avoiding over-exploitation of renewable resource system or environmental sink function, and depleting non-renewable resources only to the extent that investment is made in adequate substitute, includes maintenance of biodiversity, atmospheric stability, and other ecosystem functions not ordinarily classed as economic resources.</p>
<p>2</p> <p>What is Sustainable Development?</p> <p>Goals, Indicators, Values, and Practice</p> <p>Robert W. Kates, Thomas M. Parris, Anthony A. Leiserowitz/ 2005</p> <p><i>April 2005 Issue of Environment: Science and Policy for</i></p>	<ul style="list-style-type: none"> - Sustainable development is the ability to make development sustainable- to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs. This concept emerged because of conflict between environment and developments were first acknowledged in 1972. In addition, this journal tries to provide another definition of sustainable development by analyzing its indicators, values, goals and practices. - The goals of sustainable development can be seen in three time-horizon of world's set of goals with, namely:



Sustainable

Development, Volume 47

Number 3, pages 8-12

a. UN Millennium Declaration (2015), such as peace, development, environment, human right, the vulnerable, hungry, and poor.

b. Sustainability Transition of the Board on Sustainable Development (2050): provides the energy, materials, and information to feed, nurture, house, educate, and employ the many more people of 2050- while reducing hunger and poverty and preserving the basic life support system of the planet.

c. Great transition of the Global scenario Group (beyond 2050): achieve all humankind "a rich quality of life, strong human ties and a resonant connection to nature", so it would be the quality of human knowledge, creativity, and self-realization that represent the development, not the quantity of goods and services.

- It is difficult to determine the exact indicator of sustainable development since each organization in this world have different emphasize and propose the indicator based on their idea. But this journal tries to determine by summarizing the indicators from 12 organizations and analyze these. The result is that **the environment and ecological system is the object to be**



sustained; while most of them decide the social aspect and some of them decide the economic aspect are the matters to be developed.

- The one explicit statement of supporting values of sustainable development is found in the Millennium Declaration that set the fundamental and essential values to international relations, namely: freedom, equality, solidarity, tolerance, respect for the nature, and shared responsibility.
- Sustainable development is also defined in practices that includes developing social movement, organizing institutions, crafting sustainability science and technology, so from each practices will result a new definition of sustainable development. The concrete challenges of sustainable development are at least as heterogeneous and complex as the diversity of human societies and natural ecosystems around the world.

3 Experiences from Supervising a Farmer network for Sustainable Agriculture Development in Central Thailand.

- The implementation of Green Revolution technology package has given rise on pollution and deterioration of human health, and other negative impacts. This evidence that lead to the idea to implement sustainable agriculture



<p>Prateep Verapattananirund / 2007</p> <p><i>Project Report of Eco-community Vigor Foundation, Thailand.</i></p>	<p>development.</p> <ul style="list-style-type: none"> - In the progress, The Ninth National Plan of Thailand stressed on community/farmer participation and integration of modern and traditional knowledge to produce healthier agricultural products. This policy focus on capacity building of farmer and their institution, and establishment of a farmer network. - To measure the implementation of sustainable development, the key performance indicators that cover basic aspect of sustainable development are used, they are: <ul style="list-style-type: none"> 1 Economic: net income, production cost, dependency upon, amount of saving. 2 Social: expenses for health, migration from family, continuity of external input, number of group members, resources persons, and outside organizations involved. 3 Environmental: number of natural enemies, amount of chemical inputs, soil fertility level, interactive learning for a number of interactive management activities. - The research concludes that networking creates an opportunity for farmers to express opinions and
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		<p>share experiences from what they have learned.</p> <p>Exchanging ideas with other people from the same occupation help them to gain some additional knowledge and inspired them to solve problems by themselves and to recognize the importance of self-reliance.</p>
4	<p>Promoting Sustainable Agriculture Development and Farmer Empowerment in Northeast Thailand.</p> <p>Sachika Hirokawa / 2010</p> <p>(4th Asian Rural Sociology Association International Conference)</p>	<ul style="list-style-type: none"> - The small-scale farmers in Northeast Thailand face several difficulties in shifting farming method from the conventional farming involving chemical inputs to sustainable agriculture. - The obstacles of Sustainable agriculture are: <ul style="list-style-type: none"> a. Lack of know-how (skill) b. Lack of readiness, in term of: <ul style="list-style-type: none"> - Physical assets: land rights - Economic assets: funding - Social infrastructure: knowledge, motivation, network, assistance. c. Lack of government administration. - The factors that have enable the changes are: <ul style="list-style-type: none"> a. The village headman policy b. Increasing farmer's knowledge and skill by lecturers and scholars c. Community groups establishment d. Ease of access to information.



5	<p>Struggling with -</p> <p>Sustainability: A Comparative Framework for Evaluating Sustainable Development Programs</p> <p>Justin M. MOG / 2004</p> <p><i>World Development Journal</i> Vol. 32, No. 12 pp. 2139-2160</p>	<p>Programs for developing sustainable agriculture in Philippines have some impacts, namely:</p> <p>a. Economic impact</p> <ul style="list-style-type: none"> • Reduce inequality • Reduce poverty • Increase security of land tenure • Increase access to credit • Reduce dependency on external farm inputs • Diversity farm operations and livelihood strategies • Increase access to efficiently functioning markets and market information <p>b. Socio-political impacts</p> <ul style="list-style-type: none"> • Cultural acceptability • Policy support • Facilitate learning and knowledge-sharing • Institutional flexibility/adaptability • Facilitate process of social change • Minimize local growth in human population and the consumption of non-renewable resources • Organize community and mobilize local resources
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		<p>c. Ecological impacts</p> <ul style="list-style-type: none"> • Maintain ecological integrity • Protect landlord increase biological and genetic diversity (particularly of indigenous species) • Prevent land degradation • Protect air and water quality <p>- Key factor making the implementation of program successfully:</p> <ul style="list-style-type: none"> • Character of participation • Success and nature of institution and capacity building efforts • Diversity, multiplicity, and adaptability of ideas promoted by the program • Accounting for heterogeneity, diversity, and dynamism • Understanding and use of local knowledge, skills, initiative and constraints • Recognizing the influence of external conditions, markets, and policies.
6	<p>Education for Sustainable Development in Africa: the Search for</p>	<p>- Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues.</p>



	<p>Pedagogical Logic</p> <p>Offei Okoffo Manteaw / 2012.</p> <p><i>International Journal of Educational Development</i> Vol. 32 pp. 376-383</p>	<ul style="list-style-type: none"> - In Africa, logical pedagogy for sustainable development should encapsulate teaching and learning approaches that aim at addressing sustainable development challenges from an educational perspective. - Teaching and learning processes need to be consciously linked to local cultural, social, ecological and economic experiences and aspirations. - These processes should also be aligned with local community epistemologies and in ways that allow relevant knowledge to be co-created and utilized in pursuit of sustainable development goals.
7	<p>Agriculture, Development, and Urban Bias</p> <p>Dirk Bezemer & Derek Headey / 2008</p> <p><i>World development Journal</i> Vol. 36 No. 8 pp 1342-1364</p>	<ul style="list-style-type: none"> - Agriculture still has a vital role to play in igniting growth and poverty reduction at early stages of development. - Most of the initial solutions to solve agricultural development problems have to be found within agriculture, not outside. Targeted investments in agriculture and active opposition to urban bias in its many forms remain in critical to growth and poverty reduction in our time.



8	<p>Developing Effective Policies for the Sustainable Development of Ecological Agriculture in China: the Case Study of Jinshan County with a System of Dynamic Model.</p> <p>Tian Shi & Roderic Gill / 2004.</p> <p><i>Journal of Ecological Economic</i> Vol. 53 pp. 223-246</p>	<ul style="list-style-type: none"> - The diversity of land use patterns, government low interest loans, and government support for training are important policy measures in promoting the sustainable development of ecological agriculture. - Limited availability of information, risk aversion, and high transaction cost are among the major barriers to the adoption of alternative agricultural practices. - The importance of capacity building and institutional arrangements is emphasized through the development of an improved policy making process on agriculture sustainability. - Environmentally sound technology (e.g., biogas project) alone cannot sufficiently induce farmers to adopt ecological agricultural practices. - The combination of system dynamics modeling and ecological economic analysis can provide greater understanding of, and important insights into, the long-term processes of agricultural and social development and of economic-environmental interactions at a regional scale. - Factors such as inadequate technology, low finance, limited human resources and poor public environmental awareness, limit the further
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		implementation of ecological agriculture.
9	Development of Circular Economy is a Fundamental Way to Achieve Agriculture Sustainable Development in China Han Jun & He Xiang / 2011 <i>Journal of Energy Procedia</i> Vol. 5 pp. 1530-1534	<ul style="list-style-type: none"> - Circular economy has become the effective path about the sustainable development of every country as the model according with the sustainable development principle. - The agriculture connects closely with the natural ecosystem, which puts agricultural economic system to the harmonious process of the material circulation in the natural ecosystem. - It provides the way of development of circular economy in agriculture.
10	Development Strategy Research of Modern Eco-Agriculture in the basis of Constructing the Rural Circular Economy: for the example of Shandong Province CAO Junjie, LI Ming, &	<p>The proper strategies to develop modern eco-agriculture in Shandong province:</p> <ul style="list-style-type: none"> - Strengthening the propaganda of eco-agriculture and circular agriculture, and improve the eco-agriculture consciousness of the society and farmers. - Gradually increase the construction of eco-agriculture, and form the policy system of supporting eco-agriculture development.



Shuguo / 2011	- Reinforce the support of technology development on eco-agriculture, and gradually improve the technical level of eco-agriculture.
<i>Journal of Energy</i>	
<i>Procedia</i> Vol. 5 pp. 2504-2508.	Restrictive factors in modern eco-agriculture and circular agriculture development:
	- The contradiction between population and land is aggravates, and soil condition is worrying.
	- Water and biology resources of agriculture are short.
	- Unreasonable production mode in agriculture exacerbates the deterioration of rural ecological environment.

From those previous research can be taken conclusions related to several important points concerning sustainable development, sustainable agriculture development and also the factors that influence its implementation. In the term of sustainable development can be concluded that:

1. Approaches of development theory always move along with the displacement of human and nature needs, and can be classified based on the period of time.
2. Sustainable development concept emerges as a result of conflict between environment and developments.
3. Sustainable development concept tries to balance the economic, social and environmental aspects. Every aspect has its own emphasizing depend on the kind of organization.



4. Sustainable development concept aims to maintain ability of future generations to meet their own needs by sustaining the environment and ecological system along with the development of social and economic aspects.
5. Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues.

The concept of sustainable development has been implemented in many sectors since its emergence, including in the sector of agriculture. Related to its implementation in the agricultural sector, there are several important points can be taken from those prior researches, they are:

1. Sustainable agriculture development concept is implemented to answer the problems that caused by the implementation of Green Revolution which results degradations and other negative impacts.
2. Along with the concept of sustainable development, this concept also tries to balance the economic, social, and economic aspects with the major priority to manage and conserve the natural resources in order to ensure the attainment and satisfying human needs both current and future generations.
3. Sustainable agriculture development concept aims to remove the usage of chemical input and other inappropriate systems that can destroy the environment and ecological system with the consideration that the environment and ecological system is the main capital of agricultural sector.

However, there are still many obstacles in the implementation of sustainable agriculture that caused by the lack of farmer capabilities (related to



their knowledge, education, skill, and access of information and capital), government support, and other organization's care. The researches stated that social aspects are one of the most important factors that determine the success of sustainable agriculture development, especially human development aspect such as education, training, and access of information with the consideration that human development will be able to empower the farmers. It is because farmer is the key actor in agriculture sector. Through the empowerment, the farmers will be able to increase their abilities in order to be more independent.

2.2. SYNTHESIS

In conducting research, previous researches are needed in order to be the guideline in analyzing the data and phenomenon along with the theories which are used, and also can be used in drawing conclusion. In addition, from those previous researches can be known whether our research discuss a new matter or not.

In this research, the previous researches along with the theories are used to analyze the data and draw the conclusion. Those previous researches, generally stated that sustainable agriculture development as the implementation of sustainable development in agriculture sector requires the concern on increasing economic aspect while preserving the nature which will be able to give positive impacts toward social condition of the society, especially the farmers. In addition, the previous research also stated that education is critical to improve human capacity in order to address environmental and development issues so that they can faced the problems that occur in implementing sustainable agriculture development. Moreover, one of the previous research states that one



of the factors that cause the farmers can change their agriculture practice from conventional to sustainable and also able to implement sustainable agriculture development properly is empowering them by the increasing farmer's knowledge and skill by lecturers and scholars. The farmer empowerment that is crucial for the implementation of sustainable agriculture development is also can be conducted by strengthening farmer organization so that they have a network to be able to access agricultural input easier and cheaper.

Therefore, those previous researches are very useful for this research in analyzing the data, determining and classifying the efforts of local government whether those efforts lead to sustainable agriculture development and farmer empowerment or not so that the right conclusion can be drawn in order to be able to give appropriate recommendations for all related department and agencies which has responsibility to develop sustainable agriculture sector in Malang Regency as the site of this research, and also other party which has interest to this topic.

2.3. LOCAL GOVERNMENT IN INDONESIA

Local governments in Indonesia have been started to be exist since traditional society before the era of Dutch Colonialism. At that time, groups of people created a community based on genealogical and blood relationship as well as territorial closeness to maintain their existence, and created several institutions they were needed, such as politic, economic, social, culture, and defense (Nurcholis, 2007:1-2). In its progress, those communities were included into administrative system of sovereign state and categorized based on geographical limits and authority to facilitate administrative interest.



2.3.1. History of Local Government in Indonesia

The evolution of local government in Indonesia can be traced back to the era of Dutch Colonialism. It was started by formulation of the Dutch Decentralization Law of 1903 that created local councils for the autonomous resident and municipalities. Then with the “Bestuurs hervormingswet” of 1922 the area of the country was divided into “gouvernementen” or provinces. In 1925 the Council for Residencies was abolished and replaced with the Council for Regencies. In addition to that the Council for Provinces was created. The first province established was the West Java (*Jawa Barat*) in 1926, East Java (*Jawa Timur*) in 1929 and Central Java (*Jawa Tengah*) in 1930. The Governor chaired the council of a province while the Regent chaired the Councils of the Regency (similar to a County). Meanwhile, the council of a municipality was to be chaired by a Mayor. Under this act there were 76 regencies and 32 municipalities on Java and 13 Municipalities outside of Java. The act of local government is adjusted several times along with the change of ruling regime in this country. The recent act of local government in Indonesia is the Local Government Act number 32 years 2004 (Maskur, 2012:22). In the Act showed that local government is the government in provincial, regency and municipality levels.

2.3.2. Governmental and Administrative Structure

Indonesia established local governments to facilitate governance by establishing agencies and dividing some authorities to manage their own area in order to develop the area and society and provide services to the local society. According the Act number 32 years 2004 about Local Government in

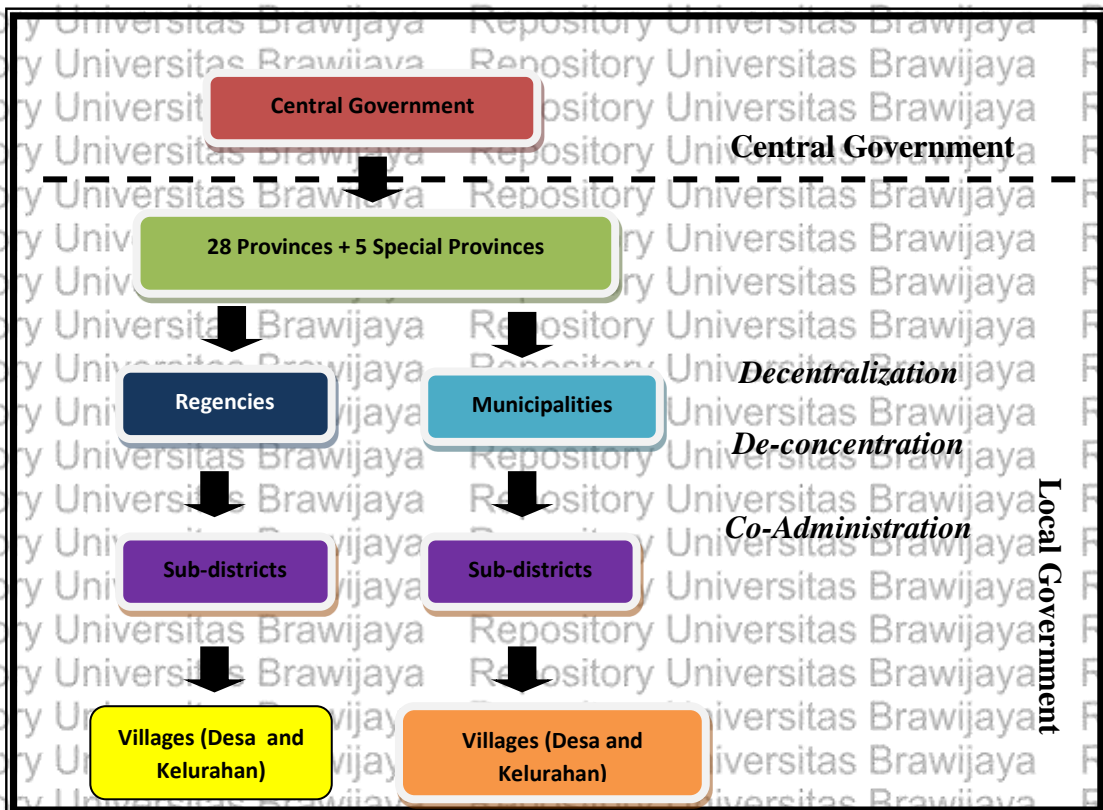


Indonesia, Indonesia is divided into provinces and regencies (*Kabupaten*) and municipalities (*Kota*) that are autonomous with considering the origin of the area as a privilege. Indonesia consists of 33 provincial regions (included 5 special province) and 416 local regions, which are divided into 92 municipality governments (*Pemerintah Kota*) and 324 regency governments (*Pemerintah Kabupaten*).

Relationship of authority between central and provincial governments, regencies and cities, or between provinces and regencies and cities, governed by the laws with respect to specificity and natural resources and other resources between the central government and plentiful regulated and conducted in a fair and aligned under the legislation.

Picture 1

Governmental Structure of Indonesia



Source: Analysis of the Writer



State recognizes and respects the local government units that are special or extraordinary regulated by law. State public entities recognize customary law and traditional rights over still alive and in accordance with the development of society and the principle of the Unitary Republic of Indonesia, which is regulated by law.

2.3.2.1 Province

Provinces are headed by the governor who is elected directly every 5 years by the citizen. Each province has its own legislative body, called *Dewan Perwakilan Rakyat Daerah* (literally means "Regional People's Representatives Assembly") where the members are elected by popular vote for 5-year term. Among the 33 provinces, there are 5 provinces that has predicate as special provinces and has special autonomy, they are:

a. Special Province of Jogjakarta

This province is headed by the king (Sultan) as a governor. The position is appointed, not elected. Usually the next governor is the son of the king, however, recently the central government proposed a law that required the governor to be popularly elected as in the other provinces, while still giving the sultan significant political power. The proposal is still under debate with objections from the people of Yogyakarta including the local legislative body and the sultan himself.

The reason of this province peculiarity is because this province declared its independent from Dutch Colonialism before Indonesia was independent. And after Indonesia was independent, the king of this province decided directly to become a part of Indonesia as a province by



maintaining the status of kingdom. This province was ever became capital of Indonesia in 1946 because the deteriorating of Jakarta.

b. Special Province of Jakarta

This province actually is a city but has equal status with the province because it became the capital of Indonesia. This province divided into 6 special capital regions, namely: Centre of Jakarta, West of Jakarta, North of Jakarta, South of Jakarta, and East of Jakarta Special Administrative Regency of Kepulauan Seribu. The mayor of each special administrative town and regency are appointed by the provincial and national government and they also don't have its own legislative assembly. The Governor of Jakarta has the power to appoint and dismiss mayors and regent within the Jakarta Special Capital Region. The local government is allowed cooperate with other cities from other countries.

c. Special Province of Aceh

The national government gives predicate "special province" to Aceh because the national government wants to muffle the separatism movement conflict in this province. This province makes conflict to separate from Indonesia. The other reason is because this province wants to implement special law which is based on Islamic principle in its area. That is why the national government gives special autonomy to implement Islamic principle of law in this province. The greater role of Aceh in local government includes its own Islamic *syari'ah* law (for Muslim citizens), flag and provincial song, local political parties are allowed, and decisions or laws made by the central government which directly affect Aceh's



administration must be referred to the local government or legislative body.

d. Papua (formerly: Irian Jaya)

Since 2001 local government has a greater role, including use of its own flag and song of province, and the governor is required to be of Papuan origins. The special autonomy is given because of Papua wants to separate from Indonesia.

e. West Papua (formerly: Irian Jaya Barat)

This province has the same status and autonomy with Papua Province.

2.3.2.2 Regency and Municipality

Every province will be divided into regency and municipality. These are local level of government beneath that of province; however they enjoy greater decentralization affairs than province does, such as provide public schools and public health facilities.

Both regency and municipality are the same level, having their own local government and legislative body. The difference between regency and a municipality lies in differing demographics, size and economics. Generally the regency has larger area than municipality, and municipality has a non-agricultural economic activities. A regency is headed by a **Regent** (Indonesia: *Bupati*), and a municipality is headed by a **Mayor** (Indonesia: *Walikota*). Regent or Mayor and the member of representatives are elected by popular vote for a term of 5 years.

2.3.2.3 Sub-District

Every regency and municipality will be divided into sub-district (Indonesia: *Kecamatan*). The head of sub-district is known as a **"Camat"**.



Camats are civil servants, responsible to the regent (for Regency) or to the mayor (for city). In Papua Province and West Papua Province, a sub-district is called District (Indonesian: *Distrik*), and is headed by a "Head of District" (Indonesian: *Kepala Distrik*).

2.3.2.4 Village

In Indonesia, there are two kind of village, namely "*Desa*" and "*Kelurahan*". Both *desa* and *kelurahan* are the area within sub-district, however *desa* enjoys greater local matters than *kelurahan* does. In the context of Indonesian Government Administration; a *desa* can be defined as a body which has authority over the local people in accordance with acknowledged local traditions of the area and headed by "*Head of Desa*" (Indonesian: *Kepala Desa*), who is elected by popular vote.

Though *desa* and *kelurahan* are part of a sub-district, a *kelurahan* has less power than a *desa*. A *kelurahan* is headed by a "*Lurah*". *Lurah* is civil servants, directly responsible to their *Camat*. *Lurah* is appointed by the Regent / Mayor upon the recommendation of *Camat* (head of sub-district) from the civil servants who master the technical knowledge of government and meet the requirements in accordance with legislation.

In Act number 32 years 2004 of Republic of Indonesia about local government In Indonesia stated that local government in Indonesia uses the principles of de-concentration, decentralization and co-administration in order to run the governmental system properly to achieve efficiency and effectiveness.

Table 2

The Differences between Centralization, De-Concentration, Co-Administration, and Decentralization in Indonesia

System	Politie Authority		Administrative Authority			Financial Resources	
	Central Gov.	Local Gov.	Central Officer in Central Gov.	Central Officer in Administrative area	Local Gov. Officer	Central Gov.	Local Gov.
Centralization	X	-	X	-	-	X	-
De-concentration	X	-	-	X	-	X	-
Co-Administration	X	-	-	-	X	X	-
Decentralization	-	X	-	-	X	-	X

Source: Norcholis, 2007: 23

The implementation of those principles is not only in the term of development but also in the other terms such as public services to achieve citizen's satisfaction, to be able to run development process properly, and also to reduce the role of central government so the local government are more independent in developing its area in order to answer the society's problems and needs.

1. Decentralization

According to the principle, the local government is autonomous area (local self-government). So, local governments have authority to manage and arrange their own. In this case the central government transferred their political and administrative authorities to the local government totally. According to the explanation above we can conclude that governor and regent/mayor is head of local government administratively and politically. Beside they have to responsible vertically (regent/mayor responsible to governor and governor responsible to president), they have to responsible to the society in each area.



2. De-concentration

According to the de-concentration principles, central government transferred its authority to governor as representative of central government and/or to officer of central government in local area. It is mean that local government is administrative area (local state government). In the de-concentration principles, the authorities transferring to local government are the administrative authorities or policy implementation, while political authorities are the authority of central government.

3. Co-administration

In addition, local governments in Indonesia also use co-administration principles. According to the Government Regulation number 52 years 2001, co administration is assignment from central government to regions or villages, and from regions to the villages to carry out certain task involving the financing, facilities, infrastructure and human resources with the obligation to report their implementation and account to the assigned. Co-administration is aimed to increase efficiency and effectiveness the government enforcement. Co administration consist of foreign affairs, defense and security, judiciary, monetary and fiscal, religion, and another authority concerning the national policy and macro development control, financial balance fund, the state administrative system and economic institutions of state human resources empowerment, conservation, and national standardization.

2.3.3. Local Government's Rights

According to Act number 32 of 2004 about local government, local government in Indonesia is an autonomous region as the result of



decentralization policy implementation. Along with the implementation of this policy, local governments in Indonesia have several rights in running the governmental and administrative system in order to achieve efficiency, effectiveness, and suitability with the local condition. In section 22 of the Local Government Act explained that local governments have rights to:

- a. Manage and arrange their own
- b. Choose head
- c. Manage the officer
- d. Manage local resources
- e. Collecting taxes and levies
- f. Getting profit share from the management of local resources and another one in local area.

According to chapter three section twenty one of that Act concerning the rights and responsibilities of an autonomous local government, in order to run their rights and responsibilities, local governments have an authority to establish agencies to help them to be more effective and efficient in conducting local development plan and achieving local development goals included Department of Agriculture and Plantation and also Department of Animal Husbandry and Animal Health, also other related departments and agencies. Some of local governments in a province combine Department of Agriculture and Plantation with Department of Animal Husbandry and Health in one department. While in the regency level these department are not always united or separated each others. Some of them have department of Agriculture and Plantation with Department of Animal Husbandry and Animal Health separately. The reason is the formation of departments in local area



depends on the local policy, whereas the social economy and geographical condition of each local government are different.

According the ninth chapter of this Act concerning local governmental working units, the department is the bodies that are established by local government in one hand. In another hand, it is the bodies that related vertically with upper department (Ministry of Agriculture in National levels, and Department of Agriculture, Plantation and Animal Husbandry in provincial levels). The major responsibility of the department is to promote and develop agriculture, plantation and livestock sector in each level.

According to the explanation above we understand that development of sustainable agriculture development in Indonesia is carried out by Department of Agriculture and Plantation in regency level. So, in this research the researcher will use Department of Agriculture and Plantation and also other related departments and agencies in regency level as locus of the research.

2.3.4. Division of Authority

It was explained in the Indonesia Constitution 1945 that Indonesia is the unitary state with republic form and using constitution and democratic system. Indonesia is headed by president as head of state and government. President is the highest executive level of the government who responsible to enforce governance and serve public service to the society. In the local governmental system, this position is belonging to the governor in provincial level and belongs to regent or mayor in the regional level. The government was also helped by House of Representative (DPR) in legislative body which



is also exist in the provincial and regional level, and also Constitutional Court (MK) and Supreme Court (MA) as judicative body with provincial and regional court and attorney as its subordinate.

2.4. SUSTAINABLE DEVELOPMENT

The development theory influenced the world since mid-1940s to the 1970s. It started after World War II that be signed by European Reconstruction.

Economists during this period believe that development was equivalent to growth process that required high capital and resource reallocation. But, after the glorious days of development, problems began in 1970s. The record shown that even with high growth of income and industrialization, countries still suffered from high unemployment, high income inequality, unbalance growth and economic instability, and so on. In addition, the development which focused on economic growth brings the negative impact toward local environment changes of the countries such as degradation of physical environment, social degradation and cultural degradation. Therefore, the development paradigm grew toward the development which more sustainable. Generally, sustainable development can be understood as a pattern of growth in which resource use aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for future generation. In order to get further understanding related to sustainable development, in the below explanation we will discuss about its definition, transformation, aspects and principles.

2.4.1. Definition of Development

The concept of development, basically, aims to increase human welfare broadly. According to several economic literatures, development is often defined



as a continuous process of increase in real income per capita through the increase of the amount and productivity of resources. From that point of view, the concept regarding development as economic growth has been born. Business Dictionary.Com gives definition of development in the four matters:

- a. The systematic use of scientific and technical knowledge to meet specific objectives or requirements.
- b. An extension of the theoretical or practical aspects of a concept, design, discovery, or invention.
- c. The process of economic and social transformation that is based on complex cultural and environmental factors and their interactions.
- d. The process of adding improvements to a parcel of land, such as grading, subdivisions, drainage, access, roads, utilities.

Development is also can be defined "as a multidimensional process involving major changes in social structures, popular attitudes, and national institutions, as well as the acceleration of economic growth, the reduction of inequality, and the eradication of absolute poverty. Development, in its essence, must represent the whole gamut of change by which an entire social system, tuned to the diverse basic needs and desires of individuals and social groups within that system, moves away from a condition of life widely perceived as unsatisfactory and toward a situation or condition of life regarded as materially and spiritually 'better.'" Moreover, there are three core values of development and these core values are:



- a. life-sustenance, it means Raising peoples' living levels, i.e. incomes and consumption, levels of food, medical services, education through relevant growth processes
- b. self-esteem, this term means creating conditions conducive to the growth of peoples' self-esteem through the establishment of social, political and economic systems and institutions which promote human dignity and respect
- c. Freedom to choose, it means increasing peoples' freedom to choose by enlarging the range of their choice variables, e.g. varieties of goods and services (Todaro, 2000:85).

2.4.2. Transformation of Development Approaches

Development approaches always transform and change along with the progress of human life's trends. The conditions of human's life that lead to the fulfillment of basic necessities also influence it. In the colonialism era, colonial regions are functioned primarily to supply imperial powers with raw materials and cheap labor. For the rich countries, the center goals of economic growth was "progress" and "modernization", but there was relatively little concern for issues of equity and social justice, even policy was not driven by the needs of the majority of people (Harris, 2000:1). By the end of the Second World War, perceptions and policies had changed drastically, Economic development, with its social and institutional correlates, came to occupy an essential place in theory and policy

In the last half of the twentieth century, four key themes emerged from the collective concerns and aspirations of the world's peoples: peace, freedom, development, and environment (Kates, et al. 2005: 2). Peace and freedom was



sought early in the post Second World War in the struggle to end imperialism and to extend human rights. The success of many former colonies in attaining national independence was followed by a focus on economic development to provide basic necessities for the poorest two-thirds of the world and higher standards of living for the wealthy third.

In the 1960, Walt Rostow published his overview of economic development. According to this view, all successfully developing countries would pass through a series of stages, from traditional society through economic “take-off” to maturity and high massconsumption. This series of stages consist of 5 stages, started from traditional society, precondition of take-off, take-off, drive to maturity, and age of high mass-consumption (Willis, 2005:40). The clear goal of economic development policy was to raise living standards throughout the world, providing steadily more goods and services to an expanding population. The international institutional structures set up after the second world war, including the International Monetary Fund, the World Bank, and the United Nations, were specifically designed with this goal in mind (Harris, 2000:3).

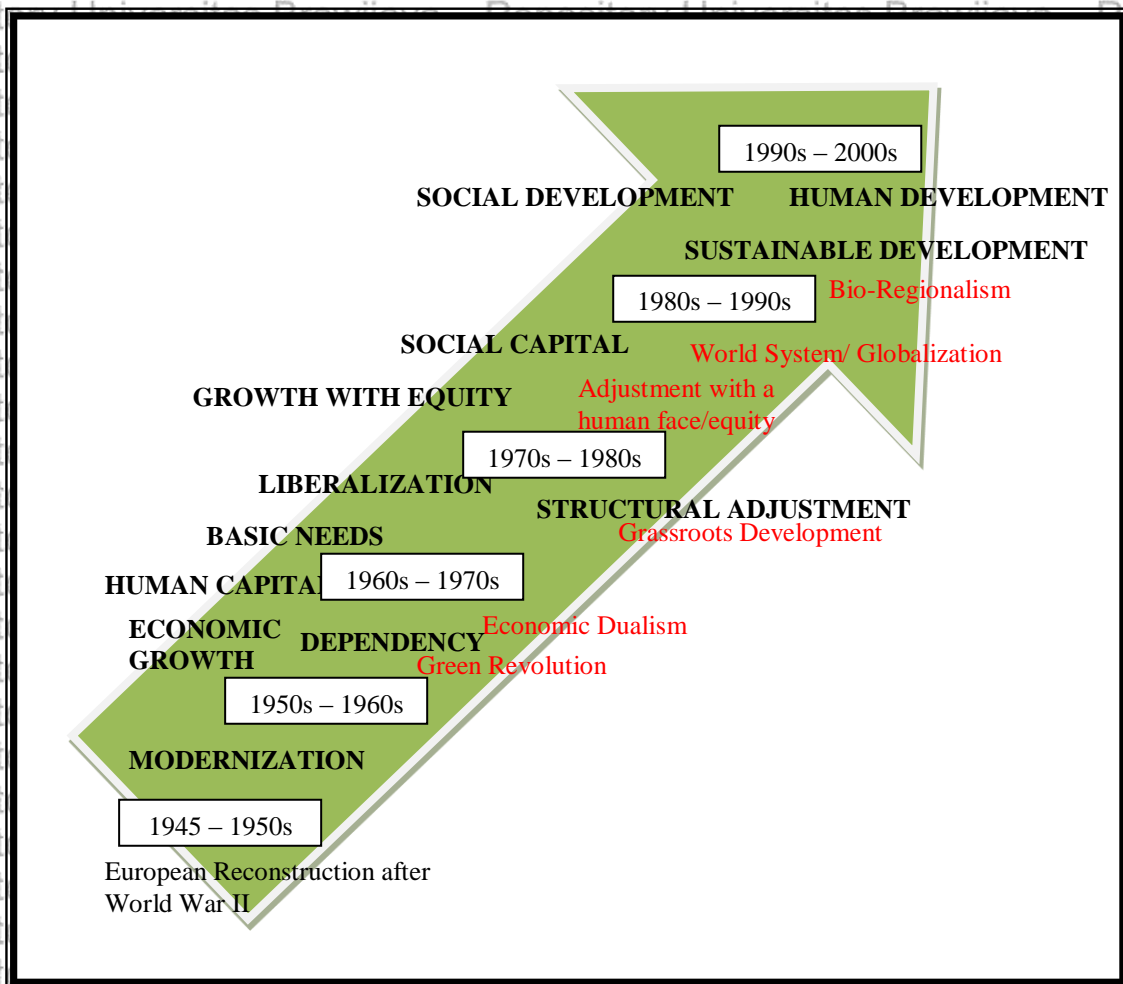
In the late 1970’s, the focus of development was on basic needs that involve education, nutrition, health, sanitation, and employment for the poor. This perspective inspired the creation of the United Nations Development Programme’s Human Development Index, which uses health and education measures together with Gross Domestic Product (GDP) to calculate an overall index of development success. Globally, most countries have made significant advances both in GDP and in Human Development Index measures. But overall, the record of development on a world scale is open to two major criticisms from ecologist with the major aim to protect and maintenance of ecosystem resilience



and natural conservation: the benefits of development have been distributed unevenly, with income inequalities remaining persistent and sometimes increasing over time; and there have been major negative impacts of development on the environment and on existing social structures (Haris, 2000:3). These critics lead to emerge of a new concept and accept by the most people in the world which is called as sustainable development. This is the concept of development which protects the environment, development which advances social justice.

Picture: 2

Development Paradigm Shift



Source: Fernanda, 2010:10



The picture of Development Paradigm Shift above shows that the concern of development in nowadays era is Sustainable Development that covers social development and human development as focuses. In addition, some experts include environmental development aspects in this new paradigm of development.

2.4.3. Sustainable Development

The idea of sustainable development grew from numerous environmental movements in earlier decades. The definition of sustainable development was created for the first time by **The World Commission on Environment and Development** which is then called The Brundtland Commission in 1987. This commission was initiated by the General Assembly of the United Nations in 1982 which was chaired by then-Prime Minister of Norway Gro Harlem Brundtland, gives brief definition of sustainable development as the *“ability to make development sustainable—to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs”* (WCED, 1987 in Kates, et al. 2005:2). The needs which are meant here are the need for biological survival and the need for a humane life. The need for biological survival is the most essential needs which are include air, water and food to be available in sufficient quantity and quality for a healthy life. While the needs for human life have dignity and meaning to raise the social status of man (Supardi, 2003:205).

While for the Government of The Republic of Indonesia, the notion of sustainable development set out in Article 1 paragraph 3 of the Law of the Republic of Indonesia Number 23 of 1997 on Environmental Management



(UUPLH), which defines environmentally sustainable development as *conscious and planned efforts which combines environment, including resources into the development process to ensure the ability of well-being, and quality of life of generations living today and future generations.*

Along with those definitions related to sustainable development, Malang Regency in Local Regulation of Malang Regency Number 7 of 2010 on Control of Pollution and Environmental Damage especially in Article 1 paragraph 14 defines sustainable development as *conscious efforts that integrates environmental, social and economic aspects into a development strategy to ensure the integrity of environment along with the safety, welfare ability and quality of life of the present and future generations.*

2.4.4. Aspects of Sustainable Development

In order to provide future generation, there is a need to keep biological survival and human live. Therefore, sustainable development encompasses a number of areas and highlights sustainability as the idea of environmental, economic, and social progress and equality, all within the limits of the world's natural resources.

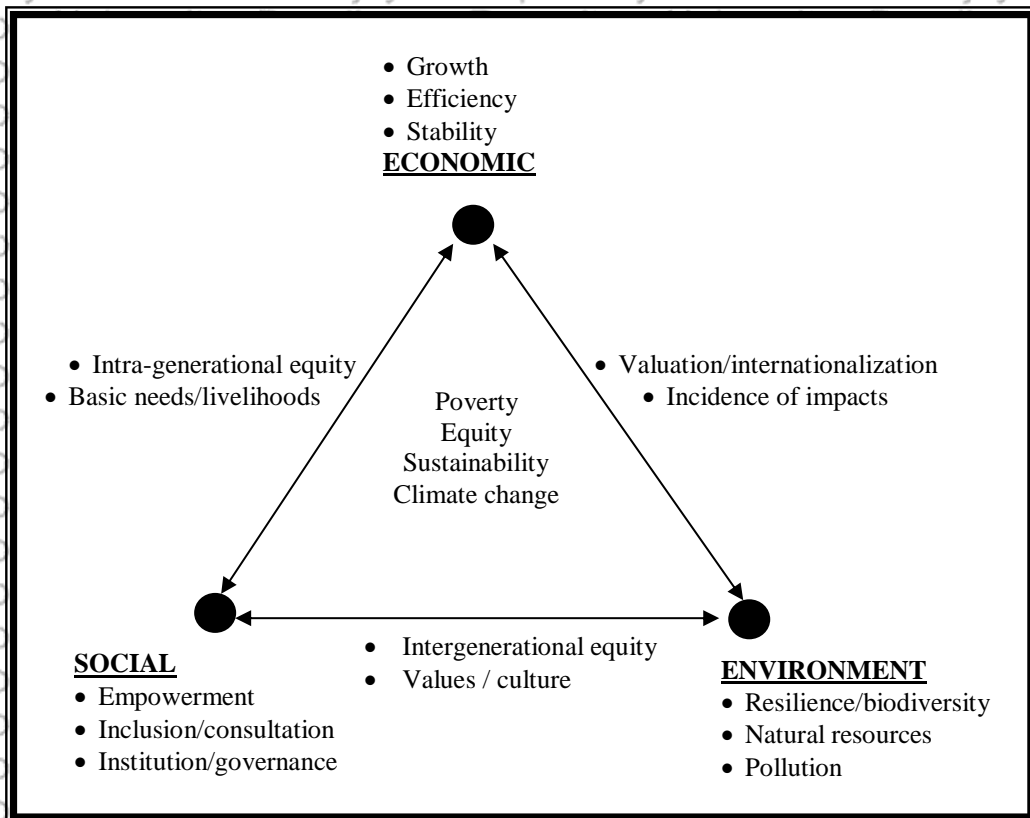
These three aspects influence each other so all of them should be **considered equally** (Suryana, 2005:45). A stable and healthy social system, natural resources, and environment are the basis for economic activity, while economic prosperity is a prerequisite for the maintenance of socio-cultural stability and sustainability of natural resources and environment of life. An unstable social system or ill (for example social conflicts and the prevalence of poverty) would tend to lead to actions that undermine



preservation of natural resources and damage the health of the environment, while threat to the preservation of natural resources and the environment (for example scarcity soil and water) can lead to chaos and soil ills.

Picture: 3

Elements of Sustainable Development



Source: Munasinghe, 2009:31

2.4.4.1. Economic Aspect

Economic progress is evaluated in terms of welfare or utility. It is measured as willingness to pay for goods and services consumed. Thus, the economic policies typically seek to increase conventional Gross National Product (GNP) and induce more efficient production and consumption of goods and services. Mainstream economics today is basically neoclassical economics,



although less known alternatives exist including Australian, classical, evolutionary, institutional, Marxist and socialist economics. Neoclassical economics is based on several fundamental assumptions:

- a. Individual consumers maximize their utility (welfare) by making rational choices among goods and services available in the market. This is known as consumer theory.
- b. Individual producers maximize their profits by making rational choices about what output to produce, what input to use, and what technology to adopt. This is related to producer theory.
- c. Individual act independently, using full and accurate information – known as market behavior.

An economically sustainable system must be able to produce goods and services on a continuing basis, to maintain manageable levels of government and external debt, and to avoid extreme sectoral imbalances which damage agricultural or industrial production.

2.4.4.2. Environmental Aspects

Human welfare actually depends on ecological service. Most of goods needed by human survival come from natural resources. Therefore, ignoring ecological limits will increase the risk of undermining long-run prospect for development. Several researchers argue that environment and geographic factors have been key drivers of past growth and development (Diamond, 1997 and Sachs, 2001 in Munasinghe, 2009:43).

The environmental interpretation of sustainability focuses on overall viability and health of living system. These ideas are applied to both natural (or



wild) and managed (or agricultural) systems, and cover wilderness, rural and urban areas. An environmentally sustainable system must maintain a stable resource base, avoiding over-exploitation of renewable resource systems or environmental sink functions, and depleting non-renewable resources only to the extent that investment is made in adequate substitutes. This includes maintenance of biodiversity, atmospheric stability, and other ecosystem functions not ordinarily classed as economic resources.

2.4.4.3. Social Aspect

Social development usually refers to improvements in both individual well-being and the overall social welfare that result from increases in social capital, typically, the accumulation of capacity for individuals and groups of people to work together to achieve share objectives. Social capital is resource people draw upon in pursuit of their aspirations and is developed through networks and connectedness, membership of more formalized groups and relationship of trust, reciprocity and exchanges. Human capital (e.g. education, skills, etc.) and cultural capital are also included within social capital, although fine distinctions do exist.

A socially sustainable system must achieve distributional equity, adequate provision of social services including health and education, gender equity, and political accountability and participation. Reducing vulnerability and maintaining the health (i.e. resilience, vigor, and organization) of social and cultural systems, and their ability to withstand shock is important. Enhancing human capital (through education) and strengthening social values, institution, and equity will improve the resilience of social system and governance.



2.4.5. Principles of Sustainable Development

Sustainable development is a way of development that has two important dimensions of the use and maintenance. Harmony between these two important dimensions must be maintained in each steps of development in any country, both in developed country, developing country, even though in underdeveloped countries with its desire to reach the welfare of citizens. However, with the trend of ever-increasing population, new problems in the field of food, clothing, health and education are also increase. As a result of conventional development patterns that exploit natural resources in bulk and blindly regardless of environmental sustainability has been continued in various countries around the world. And if the conventional development pattern is repeated, there will be the greater of the impact on the damage the ozone layer, earth's warming temperatures, rising sea levels, climate change, acid rain and the narrowing of biodiversity. These all threaten the sustainability of ecosystem function, and if the ecosystems stop functioning, then the order of life will collapse (Prakoso, 2010: 40-41).

Sustainable development principles have to be known and adhered to the goal of increasing the quality of human life in line with the commitment to the preservation of ecosystems. Based on the Rio declaration in 1992 there are 27 principles of sustainable development with the outlines of these principles as follows:

- a. Humans are the main objectives of sustainable development. Human right to obtain decent and productive life harmonious with nature;
- b. Each countries under the UN Charter and principles of international law, have recognized the full sovereignty to exploit their natural



resources, in accordance with the policy field environment and development of each and are also obliged keep the activities going on within its territory or under its control do not cause the damage of environment of other countries or territories outside countries;

c. The right to build shall be implemented in such a way that meet the needs of development and environment, both for present and future generations;

d. Protection of the environment must be taken into account as a part of integrated development, cannot be viewed separately;

e. International cooperation in the framework of poverty eradication, embodiment prerequisite for sustainable development, to reduce the gap of boundary decent living (standard of living);

f. The priority and the main treatment for developing countries and underdeveloped countries and vulnerable natural environment;

g. The responsibilities of the countries in conservation efforts, protection and restoration condition and integrity of earth ecosystem, is varying in accordance with the resulting destruction;

h. Elimination of production and consumption patterns that are not feasible and an appropriate increase in population;

i. Cooperation among the governments in order to increase mastery of science and technology, increase construction, adjustment, settlement and transfer of technology;

j. Increasing the opportunity for communities to obtain information about environment, including the consumption of harmful substances around them, as well as their participation in decision making;



k. The implementation of environmental provisions effectively. Determine the requirements of environmental quality standards and other standards that are balanced between development and environmental protection, according to the local conditions;

l. The imposition of environmental requirements in the areas of trade, which aims to improve the environment, should not be considered as unfair trade;

m. Formulation of laws concerning fines and restitution, both nationally and internationally by any state government in purposes for protecting of the rights of victims of pollution or other environment damage;

n. Prevention of environmentally damaging materials transition from one state to other countries by any government;

o. The application of preventive approaches in environmental issues according to the ability of each countries;

p. The implementation of principle of "polluter should bear the loss of arising from pollution that made" to improve non-governmental environmental costs;

q. The implementation of EIA compulsorily toward each activity that have potential impact of damage;

r. Every government should inform at an early stage about the possibility of environmental hazards that are all of a sudden. Each country is trying to help other countries in addressing such problems;

s. Every government should provide early warning and as precise as possible and also the information that is fitting to its neighboring



countries which threatened the negative impact that are among regions;

t. Recognition of the women's role in sustainable development;

u. Raising the spirit and creativity of the young generation in order to foster global partnership;

v. The government's obligation to respect tradition, and the role of indigenous knowledge in environmental management and development, maintain the identity, culture and interest;

w. The requirement of environmental protection of the nations that are oppressed or colonized;

x. Protection of the environment in times of war;

y. Peace, development and environmental protection are inter-related issues;

z. The obligation of peaceful settlement of environmental disputes;

aa. The implementation of the principles of the declaration on cooperation between the government and members of the community based on good faith and a spirit of togetherness partnership (Siahaan, 2003:145-147).

Briefly, Sustainable Development also has some principles that clearly suggest new guidelines for the development process. They also require a modification of the original goal of economic growth. The principles are as follows:

a. A concept of sustainable development must remedy social inequities and environmental damage, while maintaining a sound economic base.



b. The conservation of natural capital is essential for sustainable economic production and intergenerational equity.

c. From an ecological perspective, both population and total resource demand must be limited in scale, and the integrity of ecosystems and diversity of species must be maintained

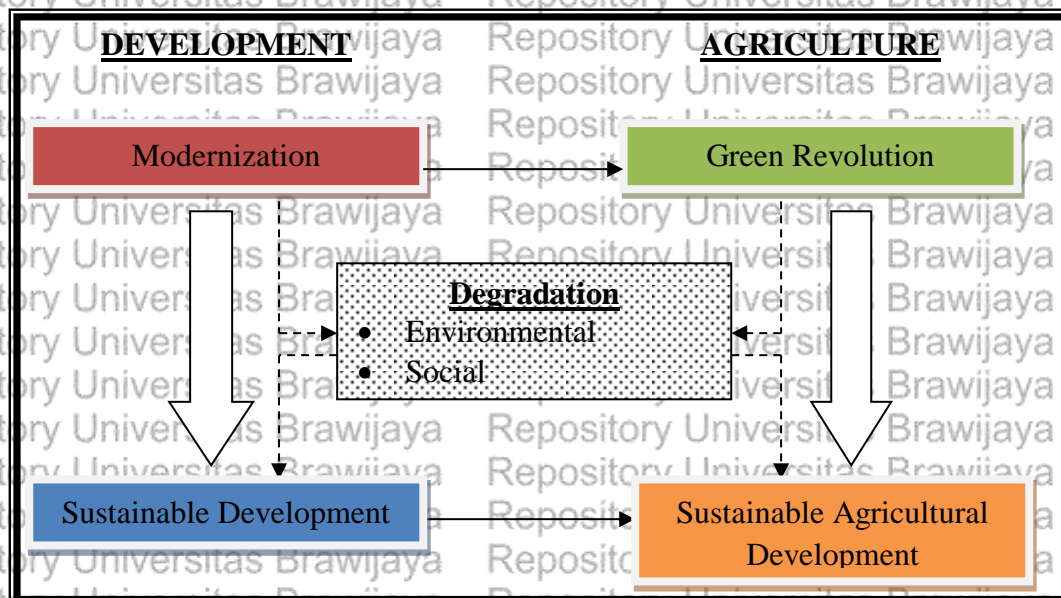
d. Social equity, the fulfilment of basic health and educational needs, and participatory democracy are crucial elements of development, and are interrelated with environmental sustainability (Harris,2000:19).

2.5. SUSTAINABLE AGRICULTURE DEVELOPMENT

Since 1980s, the issue of sustainable development became the most center of discussion. As the previous development paradigm, sustainable development is implementing in various field, including in agriculture sector that lead to the emergence of sustainable agriculture development approach.

Picture: 4

Agricultural Development Trend



Source: Analysis of the Writer



Development in agriculture sector is also shifted along with the development paradigm shift. When green revolution was implemented as a part of modernization created degradation in the term of environmental, social, and others, some experts try to find another approach to develop agricultural sector by maintaining the economic, social, and ecological aspects. And finally, the Sustainable Agriculture Development has become the answer until nowadays.

2.5.1. Definition of Agriculture

There are several definitions about agriculture, but generally they have same essence. According to the Big Indonesia Dictionary, agriculture means everything related with farming (seeking land with planted crops); and all concerned with plant, land concessions, etc.

Agriculture is a type of production activities that are based on growth processes of plants and animal. In the narrow sense, agriculture is called agriculture community. While in the wide sense it is including agriculture in the narrow sense, forestry, animal husbandry, and the fishery. All of them are important. Broadly speaking, the definition and understanding of agriculture can be summarized into the production process, farmers and employers, land as the place of business, and farm business itself. Good farming is the farming that can give product more well than if the crops, livestock, or fish are allowed to live naturally. Agriculture science is the science that studies how to manage crops, livestock, fish, and the environment in order to provide maximum result (Soetrisno, 2006:1-2).

Agriculture is the use of human power over nature with the aim of directing the development of plants and animals which are useful for the human,



so it will lead to a better condition in fulfilling human's needs. Thus agriculture is including a type of business that directly generates up to be used for living purposes. Broadly speaking, the definition of agriculture includes: the production process, farmers or entrepreneurs, land as a place of business, and farm business (Minderhoko, 2010).

Along with those definitions above, Local Government of Malang Regency in its Document of Gross Domestic Regional Product 2010 stated that agriculture is a sector which includes all of the concessions that are derived from natural and biological goods or lives where the result will be used to meet their own lives or should to other parties, and the scope of agriculture encompasses crops, plantation, forestry, animal husbandry, and fishery.

2.5.2. Definition of Sustainable Agriculture

Sustainable agriculture development is a subordination of sustainable development that is defined by the Bruntlant Commision for the first time in 1987. Based on the definition of sustainable development from the Bruntlant Commision, the World Food Organization defines the sustainable agriculture as follows: management and conservation of the natural resources base and the orientation of technological and institutional changes in order to ensure the attainment and satisfying human needs both current and future generations. Sustainable agriculture development aims to conserve land, water, plant, and animal genetic resources, does not damage the environment, technically appropriate, economically viable and socially acceptable (FAO, 1989 in Suryana, 2005:3).



According to the Technical Advisory Committee of the CGIAR (1998), sustainable agriculture is the successful management of resources for the business of agriculture to assist the changing human needs while maintaining or improving environmental quality and conserve natural resources (Reijntjes, 1999: 2). Furthermore, *the Agricultural Research Service* (USDA) defines sustainable agriculture as an agriculture system which is in the future can compete, be productive, be profitable, conserve natural resources, protect environment, and also increase health, food quality, and safety (Saptana and Ashari, 2007: 12).

Sustainable agriculture development is a model of social economic organization based on equitable and participatory vision, which confirms that the natural resources and environment is the basis of economic activity. Agriculture will be sustainable when it also concern on ecological, economically feasible, can be accountable socially and appropriate with the culture, which is based on a holistic scientific approach. Sustainable agriculture is one of a whole system approach of food, feed, and other fiber products which is balance with security environmental, social equality, and economic viability among all sectors in the community, including international community and across generation. Inherent in this definition is the idea that sustainability should be broadened not only at the global level but also in terms of time scales and towards all living organism (including human) (Mardikanto, 2009: 22-23).

According Mary V. Gold (1999), sustainable agriculture integrates three objectives, which include: environmental protection, a profitable farming, and well-being of the farmer community. These objectives have been defined variously by different disciplines, but the keyword is; the benefit/ advantages for the farmer and customers. Charles A. Francis and Garth Youngberg (1990)



gives the constraint that the sustainable agriculture is a philosophy based on human goals and on understanding the long-term impact of our activities on the environment and other species. The system is emphasizing on environmental degradation, maintaining agriculture productivity, enhancing economic viability, both in the short and long term, and maintaining community stability and quality of life (Mardikanto, 2009: 21-22).

Sustainable agriculture was addressed by Congress in the 1999 "Farm Bill" (FACTA, 1990 in Alihamsyah and Hendriadi, 2007:2). Under such law, sustainable agriculture is meant to an integrated system of plant and animal productions practices having a site-specific application that will, over the long term:

- a. Satisfy human foods and fiber needs
- b. Enhance environmental quality and natural resources based upon which the agriculture economy depends;
- c. Make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and control;
- d. Sustain the economic viability of farms operation;
- e. Enhance the quality of life for the farmers and society as a whole.

According to Wandee Suthinarakorn and Pongpan Traimongkolkul (2002: 132) sustainable agriculture also can be defined as a system of agricultural production with the following components of sustainability:

- a. Technical dimension, Environmentally sound agricultural practices.



- b. Social dimension. Sufficient well-beings of farmers, and community empowerment.
- c. Economic dimension. Sufficient economic returns to sustain the production.

2.5.3. Characteristic of Sustainable Agriculture Development

Sustainable agriculture has several characteristics as the followings (Reijntjes, et al., 1999: 2-3):

- a. Ecologically stable, which means the quality of natural resources maintained and the ability of agro-ecosystem as a whole – of humans plants, and animals to soil organism be improved. These two things will be fulfilled the land is managed and health of plants and animals and people is maintained through a biological process (regulation of its own). Local resources are used in a friendly way and renewable.
- b. Economic Progress, which means that the farmer gets enough income to meet their needs, in accordance with energy and costs incurred, and can preserve natural resources and minimize risk.
- c. Fair, which means the resources and power are distributed well so that the basic needs of all the members of society can be met and also their rights in land use and adequate capital, and technical assistance is guaranteed. Community has their opportunity to participate in decision-making process, both in field and in the community.
- d. Humane, which means that the basic dignity of all living things (humans, plants, animals) are appreciated and combine the fundamental humanity values (trust, honesty, self-esteem, cooperation, compassion) and



including keeping and maintaining cultural and spiritual integrity of the community.

e. Flexible, which means that rural community have the ability adjustment to the continual change in farming condition, for example, population increases, policy, market demand, etc.

2.5.4. Aspects of the Implementation of Sustainable Agriculture

The concept of sustainable development is oriented into dimensional sustainabilities, namely: the sustainable of economic enterprises (profit), human social life (people), and the natural ecological sustainability (planet). These three dimensions have influenced each other so that all three should be considered equally. All these three are (Suryana, 2005:45-46):

- a. **Economic dimension** related to the concept of maximization of income flow that can be obtained by at least retain productive assets which are the basis of the income. The main indicators of the economic dimension of this are the level of efficiency and competitiveness, the magnitude and growth of value added (including earnings), and economic stability. Economic dimension emphasizes on the aspect of fulfilling economic needs (material) for both present human generation and future human generation.
- b. **The social dimension** is populist orientation with regard to the need for social welfare, which is reflected by harmonious of social life (including social conflict prevented), preservation of culture diversity and socio-capital, including the protection of ethnic minorities. For that reason, poverty reduction, equitable of job opportunity and income, social politic



participation and social cultural stability are the important indicators to be considered in the implementation of development.

- c. **The dimension of natural environment** emphasizes on the need for natural ecosystem stability that includes biological living system and material of nature. In this matter includes the maintenance of biological diversity and biological flexibility (genetic resources), land resources, water and agro-climate, and the environmental health and comfort ability. Emphasizing is on the preservation of the flexure (resilience) and dynamics of ecosystem to adapt to the change, not on the conservation of astatic ideal condition which is impossible to be realized.

Moreover, sustainable farming system is also includes a moral invitation to do a good and wise thing to the environment of natural resources by considering three dimensions or aspects as follows (Salikin, 2003: 6-7):

- a. **Environmental Awareness (Ecological Sound)**, the system must not be deviated from the existing ecological systems. Balance is an indicator of harmonization of ecological systems which mechanism is controlled by natural laws.
- b. **Economic Values (Economic Valuable)**, agricultural cultivation system should refer to the consideration of profit and loss, both for ourselves and others, for short term and long term, and for organism in ecological systems and outside the ecological systems.
- c. **Social or civic character (Socially Just)**, farming systems must be in the harmony with the social and cultural norms that is adopted and held in high regard by the local community. The community should pay attention



on the social and cultural norms, moreover in Indonesia's sustainable farming system is usually the distance between the housing area and agriculture area are very close each other. By concerning to the high social value, the main consideration before planning an agricultural business in a broad sense is needed.

There are five criteria for managing a system of sustainable agriculture, namely (Salikin, 2003: 8):

- a. Economic viability
- b. Ecological sound and friendly to the environment
- c. Social just (social acceptable)
- d. Culturally appropriate
- e. Holistic system approach

2.6. SUSTAINABLE AGRICULTURAL DEVELOPMENT IN INDONESIA

Agricultural policy in Indonesia has been primarily concerned with implementing production based policies designed to pursue food self-sufficiency.

Small farm mechanization system development in Indonesia started with material transfer in the year of 1950, followed by design transfer in 1970 and then capacity transfer beginning in 1980 (Handaka, 2003:1). It was in line with the development stages of rice cultivation in Indonesia (Eko, et al., 2004 in Handaka, 2003: 1), which are identified as the period before the green revolution (1950-1970) and after the green revolution (1970-1990).

The growth of modernization ideology influence countries, particularly Indonesia, to increase productivity. Therefore, the idea of Green Revolution exists in this country. Government of Indonesia achieved food self-sufficiency in



rice through extensive government investment and through the implementation of subsidy program for fertilizer, pesticide, and irrigation. Government also increased the use of technology to increase productivity. Over the period 1970-1984, the total irrigated land area increased from 3,7 to 3,9 million hectare, the use of subsidies fertilizers increased from 0,2 to 4,1 million ton, and the use of subsidized pesticides increased from 1080 to 14210 tons. (Hendriadi, 2007: 4). In addition, Indonesia was also starting to implement Green Revolution in 1970's through Panca Usaha Pertanian (PUP) by founding some chemical fertilizer industry, agricultural tools production, and founding of pesticide industry, use superior variety of Paddy called International Rice (IR), and also give credit supply to farmer. Based on the history of green revolution, it can be defined generally that green revolution is a modern agriculture development policy to answer food requirement with improving food production by synthetic fertilizers and the other chemical elements (Widiarta, et al., 2009:3).

In one side, green revolution increased food productivity and self-sufficiency of the country. Even, this country was one of the rice top exported in the world. But, in another side, green revolution also brought negative impacts such as environmental degradation and dependency of the farmer on the government for further agricultural development (Widiarta, et al., 2009:1). Indonesia's production led approach to achieving food self-sufficiency was not sustainable. There was need for implementation of sustainable agriculture.

In Indonesia, the implementation of sustainable agriculture is conducted through institutional strengthening including regulation formulation which exclusively concern about implementation of sustainable development. It is proved with the formation of several regulations including:



1. Law number 41/2009 on Protection of Sustainable Agricultural Land
2. National Standard of Indonesia Number 01-6729-2002 on Organic Food System
3. Decree of Minister of Agriculture number 432/Kpts/OT.130/9/2003 on Designation of the Center of Standardization and Accreditation as Component Authority of Organic Food.
4. Regulation of Minister of Agriculture number 02/Pert/HK.060/2/2006 on Organic Fertilizer and Soil Cultivation

In addition, in Indonesia, sustainable agriculture also divided agriculture into two type of sustainable agriculture, namely:

1. Organic farming

Organic farming means that farmers do not use chemical fertilizer. They usually use organic fertilizer such as compost. In addition, they cannot use machinery like tractor in cultivation process. It aims to increase quality of food, create health food, and ensure the stability of soil.

2. Integrated farming

It is an integrated agricultural system integrating farm land, livestock, and water resources. It aims to increase self-sufficiency of farmers. Farmers can grow their need and produce fertilizer from their resources like livestock and organic farm waste.

3. Agroforestry

It is a farming system which the agricultural plantations are raised within the forested area, without destroying the forest itself. Through this farming system, the farmers (especially the farmer society around the forest) are



not only being able to produce food and earn income but also enhance forest resources.

2.7. EMPOWERMENT

Many researchers believe that empowerment is one of the most important factors that influence the success of development. This is because the empowerment activities are able to increase the people abilities and make them strong enough to participate in a variety of control over, and the influence of events and institutions that affect their lives by emphasizing on the acquiring of skills, knowledge, and power which is quite affecting their lives and the lives of others who become their concern (Parson, et al, 1994 in Suharto, 1997: 223).

2.7.1. Definition of Empowerment

The concept of empowerment was placed as an antithesis to the model of development and model of industrialization that are less in favor of the majority of the people. This concept is built from the framework of logic as follows:

- a. That the process of focusing power is built from focusing the mastery of production factors.
- b. The centralization of production factors will give birth to the worker communities and periphery employer communities.
- c. The power to build a body of knowledge system, political system, and manipulative ideology to strengthen and legitimate.
- d. Co-optation of knowledge systems, legal systems, and ideology systematically will create two groups of people, namely empowered community and powerless community.



Finally, dichotomy happened between the ruling powerful society and human-controlled society. To relieve the situation of powerful and powerless, exemption must be done through a process of empowerment for the powerless society (Projono, et al., 1996:269).

Empirical and historical experience of socio-economic dichotomous format has spawned a variety of views on empowerment. The first view, empowerment is the destruction of power to nobody. This view is based on the conviction that the power has alienated and destroyed mankind from their existence. Therefore, to restore human existence and save humanity from alienation and oppression, the power should be abolished. The second view, empowerment is the division of power to any person (power to everybody). This view is based on the belief that the centralized power would lead to abuse and tend to alienate the normative human rights which is no power or dominated. Therefore, power should be distributed to everyone, for all to actualize themselves. The third view, empowerment is a reinforcement to the weak without destroying the strong. This view is the most moderate view of the two other views. This view is the antithesis of the view of power to nobody and view of the power to everybody. According to this view, the power to nobody is the impossibility, and the power to everybody is chaos and anarchy. Therefore, according to the third view, the most realistic is the power to powerless (Pranarka, et al., 1996:45-70).

Along with the definition above, according to Jim Ife (1995:61-64) in Edi Suharto (2009:59), empowerment includes two key terms, namely power and vulnerable groups. The power here is defined not only to political power in the narrow sense, but power or procurement of the top clients:



- a. Personal choices and life opportunities: the ability to make decisions about lifestyle, housing and employment.
- b. Defining the need: the ability to determine the needs in harmony with the aspirations and desires.
- c. The idea or notion: the ability to reach, use and influence the institutions of society, such as social welfare institutions, education, health.
- d. Sources: the ability to mobilize the formal, informal, and community resources.
- e. Economic activity: the ability to utilize and manage the mechanism of production, distribution, and exchange of goods and services.
- f. Reproduction: the ability in relation to the birth process, child care, education and socialization.

Thus, empowerment is a process and purpose. As a process, empowerment is a series of activities to strengthen the power or empowerment of weaker groups in society including individuals who experience poverty problems. As a goal, then empowerment refers to a condition or result that is achieved by a social change: the people, who empowered, have power or have the knowledge and ability in meeting their needs whether they are physical, economic, and social as well as have confidence, able to aspiration, have livelihood, participate in social activities, and independent in carrying out the duties of life. Sense of empowerment as the goal is often used as an indicator of the success of empowerment as a process.

If assessing empowerment etymologically, it is derived "power" which means strength or ability. Departing from that notion, empowerment can be understood as a process towards the defenseless or the process to gain power/



capability/ or process of giving strength and power/ ability/power of the party who has the power to parties that are less or not powerless.

Empowerment should not contain people into the trap of dependency (charity), but should deliver the community to the process or stage of independence. Ambar Teguh Sulistyani (2004: 9) mentions there are two special points derived from the meaning of empowerment, namely:

- a. Power is understood as a capability that should be owned by the public so they can do something (development) independently;
- b. While empowerment is a gradual process that must be done in order to acquire and improve so that communities are able to be independent.

Randy R. Wrihatnolo, et al. (2007: 75-76) explain the sense of community empowerment and empowering community as follows:

Community empowerment is elements that allow people to survive and dynamic in the sense of personal development and achieve progress. Empowerment is a source of insight into what is in politics at the national level called national defense. While, empowering communities is an effort to enhance the dignity of Indonesian society in the taste is now not able to escape the poverty trap. In other words, is to enable and to make the people independent.

Some experts suggest that the definition of empowerment can be seen from the objectives, process, and ways of empowerment (Suharto, 1997:221-224):



- a. Empowerment aims to increase the power of people who are weak or unlucky (Ife, 1995).
- b. Empowerment is a process by which people become strong enough to participate in a variety of control over, and the influence of events and institutions that affect their lives. It emphasizes that people acquire skills, knowledge, and power which is quite affecting their lives and the lives of others who become their concern (Parson, et al, 1994).
- c. Empowerment refers to the re-allocation efforts of power in a changing social structure (Swift and Levin, 1987).
- d. Empowerment is a way with the name of people, organizations, and community directed to be able to control or power over life (Rappaport, 1984).

2.7.2. Indicators of Empowerment

Schuler Sidney Ruth, Hashemi Syed M and Riley Ann P. developed indicators of empowerment, which they call the empowerment index (Suharto, 2005: 63-65). The success of community empowerment can be seen from ability in terms of economic, access welfare benefit, and cultural and political. The three aspects are associated with the four dimensions of power, they are: power within, power to, power over, and power with.

The dimensions of power reflect the level of individual ability to make changes and progress in their lives. According to J. Rowlands (1997, 1998) those levels of individual abilities are as follows:

- a. Power within: feeling of self-worth and self-esteem that come from within individuals.



- b. Power with : the power that comes from individuals working together collectively to achieve common goals.
- c. Power to : the ability to see possibilities for change.
- d. Power over : the ability to dominate. This form of power is finite, so that if someone obtains more power then it automatically leads to someone else having less power (Willis, 2005: 102).

Meanwhile, according to K. Suhendra (2006:86) indicators of an empowered community are:

- a. Having the ability to prepare and use the institutions and resources that exist in the community.
- b. Can run the bottom-up planning.
- c. Economic ability and activity.
- d. Ability to prepare opinions and without any pressure.

2.7.3. Strategy of Empowerment

Ruth J. Parson, et. al. (1994: 112-113) states that the empowerment process carried out collectively. She argued that, there is no literature which states that the empowerment process occurs in one-on-one relationship between social workers and clients in the setting of individual help. Although this kind of empowerment can boost client's confidence and ability, but this is not the main strategy of empowerment.

However, not all social work interventions can be done through collectivity. In some situations, empowerment strategies can be done individually, in turn, although this strategy was still associated with the collectivity in the sense



of linking clients with resources or other systems outside of him. In the context of social work, empowerment can be done through three level or dimension of empowerment (empowerment setting) namely: the micro, mezzo, and macro.

a. Micro Level

In this level, empowerment conducted on individual clients through guidance, counseling, stress management, crisis intervention. Its main purpose is to guide or train the client in performing the duties of life. This model is often called as Task Centered Approach.

b. Mezzo Level

In this level, empowerment is conducted in a group of clients. Empowerment is done by using the group as a medium of intervention. Education and training, group dynamics are usually used as a strategy to increase awareness, knowledge, skills and attitudes of employers to have the ability to solve the problem that they face.

c. Macro Level

This approach is also known as the Large System Strategy, because the target system changes directed at the wider environment. Formulation of policy, social planning, campaigns, social action, lobbying, community organizing, conflict management are some of the strategies in this approach. Large System Strategy views clients as people who have the competence to understand their own situations and choose and to select and determine appropriate strategies for action.



In contrast to Parson who sees empowerment strategy from the broad scope of the target, Dadang Solihin (2009: 42-45) classifies empowerment strategy in several respects as follows:

a. Community Empowerment, consist of several requirements as follows:

- 1) Establishment of a democracy climate and participation generally until become an inherent value in every action in the community empowerment program;
- 2) Decentralization and independence in decision-making of the problems and the solution has strong empirical roots. This improves the effectiveness and efficiency in the development of problem-solving efforts;
- 3) Increasing the ability of central and local government in serving the needs of poor and marginalized;
- 4) The sustainability of the program or activity by facilitating the movement of society in maintaining and improving outcomes of programs and projects;
- 5) Provision of facilitator to move the life of group and local communities, and provide managerial knowledge. The facilitator also serves as a mediator to enable the equivalent communication for the poor and marginalized to the other party so that the access to the poor is widely open.

b. Promoting Opportunities

- 1) Development of public policy in economic, political, social, and cultural layers allocated to the poor and marginalized;
- 2) Development of physical infrastructure in transportation, communications, housing, health care, especially for areas where lagging, physical



development geared to enhance and accelerate the acquisition impact on regional economic development;

- 3) Providing access to educational institutions, economic institutions, social institutions, political institutions, cultural institutions, especially to poor families and groups of women and thus the lower layer and marginalized groups have the capital to compete in modern life.

c. Development of Social Protection (Enhancing Social Security)

- 1) Provision of legality to the property of the poor to be used as working capital and acquisition of micro/small credit;
- 2) The establishment or strengthening of a group or organization in a modern way, so that the poor can take advantages of economic, political, social and cultural access for the improvement of social security and welfare;
- 3) Development of cooperation, between individuals, institutions/community of self-help groups, government agencies and economic institutions. Networking is useful to expand the limits of individual or group, as well as the defense of the crisis that might confront a sudden.

2.7.4. Empowerment Approaches

Edi Suharto (1997:218-219) says that the implementation process of empowerment and an achievement of objectives can be achieved through the empowerment approach which is shortening to 5 methods, namely:



a. Create Possibility

Creating an atmosphere or climate that allows potential community develops optimally. Empowerment should be able to free society from the cultural barriers that inhabit and structural.

b. Strengthening

Strengthen the knowledge and skills in solving community problems and meet their own needs. Empowerment must be able to grow and develop all the skills and confidence the people

c. Protection

Protecting the public, especially vulnerable groups so as not oppressed by a powerful group, avoiding the occurrence of an unbalanced competition (not to mention unhealthy) between the strong and the weak. Empowerment should be directed to the elimination of all types of discrimination and domination that are not profitable for the poor people.

d. Giving Supports

Provide guidance and support so that communities are able to perform the role and duties of life. Empowerment should be able to support communities in avoiding the falling into the circumstances and the position of an increasingly weak and marginalized.

e. Maintenance

Maintain conditions conducive to keep a proper balance of power distribution between the various groups in society. Empowerment must be able to ensure harmony and balance that enables everyone the opportunity to try.



2.7.5. The Strategy to Empower Society

Brenda DuBois and Karla Krogsrud Miley (1992:211) in Edi Suharto (2009:68) gives some manner or the more specific techniques that can be done in community empowerment, namely:

- a. To help build relationships that: (a) reflects the response of empathy; (b) respect the right of client self-determination, (c) respect diversity and individual uniqueness, (d) emphasize collaboration client (client partnership).
- b. To establish communication: (a) respect the dignity and worth of the client, (b) consider the diversity of individuals, (c) focuses on the client, (d) maintain the confidentiality of clients.
- c. To engage in problem solving: (a) strengthen the participation of clients in all aspects of the problem solving process, (b) respect the rights of clients, (c) assembling the challenges as learning opportunities, (d) involving clients in decision making and evaluation.
- d. To reflecting the attitudes and values of social work profession through: (a) adherence to professional code of ethics, (b) involvement in professional development, research, and policy formulation, (c) translating private troubles into public issues, (d) elimination all of discrimination forms and inequality of opportunity.

2.7.6. The Role of Stakeholders in Community Empowerment

In the framework of community empowerment, the respective contributions of actors (government, private sector, and society) should be designed in order to be able to achieve the empowerment's goals effectively.



In the framework of community development should be designed respective contributions of actors, namely governments, the private and the public so that the expected form of empowerment. According to Ambar Teguh Sulistiyani (2007: 97) the roles of the three actors can be seen in the following table:

Table 3
The Role of Stakeholders in Community Empowerment

Actor	The Role in Empowerment	Output of the Role	Facility
Government	Formulation and determining policy, implementation, monitoring, evaluation and mediation.	Policy, Special/ Sectoral Budgeting, technical direction, implementation direction, indicator of success of law regulation, problem solving of lawsuit.	Fund, guarantee, tools, technology, network, information management system, education
Private Sector	Contribution in formulation, implementation, monitoring and evaluation.	Consultation and recommendation of policy, <i>Policy action</i> implementation, donor, <i>private investment</i> maintenance.	Fund, tools, technology, experts and skilled employee
Society	Participation in formulation, implementation, monitoring and evaluation.	Suggestion, input, critic, recommendation, objection, support in policy formulation, <i>Policy action</i> , self-supporting labourer, Half-fund become the object of participation, main actor, rekindle of social control function.	Skilled labourer, trained labourer, Half-skilled labourer, half-trained labourer

Source: Teguh, 2009:97



From the table above, it can be seen that every stakeholders have their own roles and responsibilities in empowerment programs. Basically, the three stakeholders cooperate to formulate, implement, and evaluate the empowerment programs. However, the government is the main actor in encouraging programs, while private sector as the supporting actor by giving consultation and recommendation of policy, policy action implementation, donor, and private investment maintenance. In addition, the society has double role as supporting actor and the object of empowerment programs.

2.7.7. Phases of Society Empowerment

According to Ambar Teguh Sulistiyani (2007:83) empowerment is a process of learning, in the context of community empowerment, it will be occurred gradually. The phases that must be passed are:

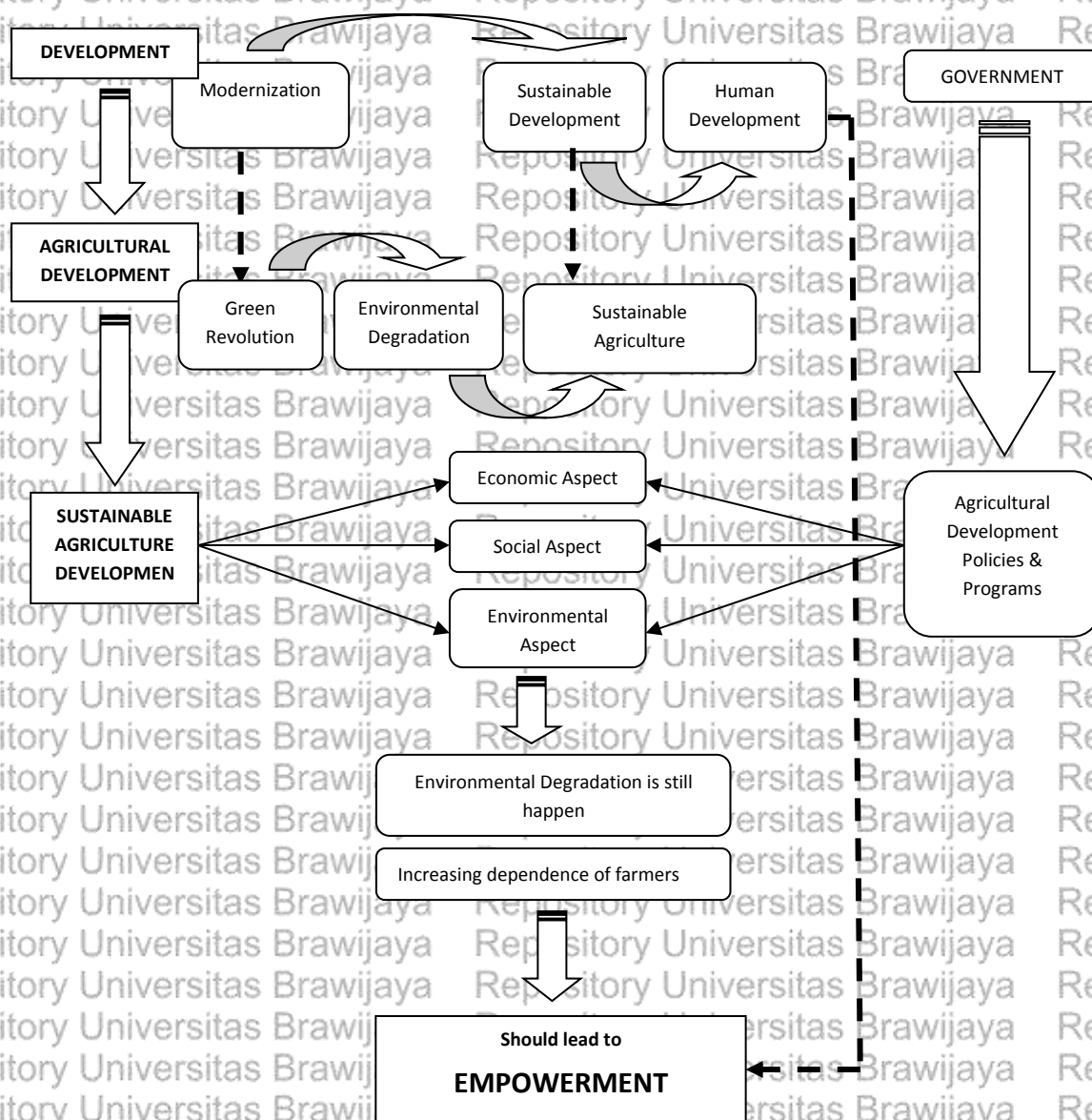
- a. Phase of awareness, it is a people behavior where they feel that they need to increase their self-capacity.
- b. Phase transformation, it is related to knowledge, proficiency skills for the future and provide basic skills so that they can take a role in the development.
- c. Phase improving intellectual ability, skill proficiency, forming the initiative and innovative ability to deliver on independence.



2.8. THEORETICAL FRAMEWORK

Picture 5

Theoretical Framework





CHAPTER III

RESEARCH METHODOLOGY

This chapter explains the method and approach used by researcher in conducting this research. Therefore this chapter consists of eight parts, namely: research type, research focus, location and site of research, source and type of data, data collection techniques, research instruments, analysis method, and data validity. Through this chapter, the readers are expected to be able to understand the process of the research.

3.1. RESEARCH TYPE

In this study, the descriptive research method with qualitative approach will be used by the researcher. The descriptive research method with qualitative approach is a research process that aims to describe the exact nature / something was happening and took place on the research conducted. The reason for using this kind of approach and method is because the principle objectives of this study are to describe, illustrate in a systematic, factual and accurate statement of the facts and the relationship between phenomena. As explained by Lexy J. Moleong (2000: 6) that:

Qualitative method is research procedures which produce descriptive data in the form of words or oral of people and behaviors that can be observed.

This approach is directed at the individual's background and a holistic (whole). So in this case should not isolate the individual or organization into a variable or hypothesis, but should view it as part of wholeness.



Meanwhile, along with Lexy J. Moleong's definition of qualitative research method, Huberman.B. Miles (1992: 1-2) gave his explanation concerning qualitative data as follow:

Qualitative data is a source of broad descriptive and sturdy, and includes an explanation of the processes that occur in the local scope. With qualitative data, we can follow and understand the flow of events in chronological order, assess the cause and effect within the scope of the local people's minds, and again, the qualitative data is more likely to be guiding us to obtain discoveries unforeseen and to form a new theoretical framework of data. It helps the researchers to go beyond the initial preconceptions and frameworks.

Based on an understanding of descriptive research method, in this research the researcher will describe the situation of all related organizations/institutions by viewing and observing facts reveal the existence of an object, phenomenon, situation and then describe, interpret and drawn a conclusion in a systematic form of writing.

3.2. RESEARCH FOCUS

Before doing the research, the very important thing to do is determine the focus of research. According to Lexy J. Moleong (2000: 297), the focus of research is determining which issues that become the focus of research. In order to limit the study concentration and obtain relevant information for the problem, the focus of research needs to be determined. The focus of research will facilitate



the researcher in data collection process and determining the appropriate data.

Accordingly, the focus in this study is as follows:

1. The efforts made by the local government of Malang Regency in developing agriculture sector support the practice of sustainable agriculture and lead to farmer empowerment.
 - a. Economic dimension
 - b. Environmental dimension
 - c. Social dimension
 - d. increasing of farmer's human resources quality
2. The supporting and inhibiting factors for local government in developing sustainable agriculture.

3.3. LOCATION AND SITE OF RESEARCH

The research location is a place or location where the researchers will conduct research. In this study location, researchers will obtain data and information relating to the themes, issues and research focus has been determined. The location of this research is the Local Government of Malang Regency, East Java, Indonesia.

The study was held in Malang Regency, East Java Province, with the consideration that Malang Regency is a Regency that has the large area approximately 3.347,8 km², is ranked second largest of 38 regencies and municipalities in East Java Province (Local Government of Malang Regency, 2010:2). Of the total area, around 75 percent is agricultural land in the form of dry land, wet land, forest, and agriculture estates (Local Government of Malang Regency, 2010:228-229). This geographical condition is strongly related to the



society's occupation where from the total population over the age of 10 years old which is in the amount of 1,407,686 people, 511,966 people work in agriculture sector, and the rest of them work in the other major sectors, such as mining, manufacture, construction, transportation and communication, trade, service, and others (Local Government of Malang Regency, 2010:120-122). In addition, agriculture sector has been still the highest contributor toward GDRP since over the last five years, even the contribution decreases year by year but it is still the highest contributor toward GDRP in Malang Regency (Local Government of Malang Regency, 2010:481). Therefore, the agriculture sector in this regency should be developed sustainably in order to enhance the social well-being of the most of people, especially the people in this district in present and future times.

The research site is a place where the researchers capture the actual situation of the item being examined in accordance with the problems that have been put forward. In this research, the researcher will determine several related department in Malang Regency as the site, namely Department of Agriculture and Plantation, Department of Forestry, Department of Animal Husbandry and Animal Health, Department of Marine and Fishery, Environment Agency, Department of Irrigation, and Food Security and Counseling Implementer Agency.

3.4. SOURCES AND TYPES OF DATA

The data resources can be simply explained as places where the data and important information found, or the subjects from which the data can be obtain and support the research. Related to the qualitative research method, John Lofland and Lyn H. Lofland in Lexy J. Moleong (2000: 112) explained that



the main data sources within qualitative research is the words, and actions of the others are additional data such as documents, phenomena / events, people.

The data obtained can be classified based on its type, and also can be simply explained as follows:

1. The primary data source. This kind of data is directly obtained from the field and the people who involve in the research through observation, interview, and recording. related to this research, there are several subjects as the primary data sources, namely:
 - a) The officer of Department of Agricultural and Plantation of Malang Regency, East Java, Indonesia.
 - b) The officer of Department of Forestry of Malang Regency, East Java, Indonesia.
 - c) The officer of Department of Marine and Fishery of Malang Regency, East Java, Indonesia.
 - d) The officer of Department of Animal Husbandry and Animal Health of Malang Regency, East Java, Indonesia.
 - e) The officer of Department of Irrigation of Malang Regency, East Java, Indonesia.
 - f) The officer of Environment Agency of Malang Regency, East Java, Indonesia.
 - g) The officer of Food Security and Counseling Implementer Agency of Malang Regency, East Java, Indonesia.

2. Secondary data sources. This kind of data is the result of activities of other related subjects and can indirectly provide information to support the research. It means that researchers did not seek his/her own collection in



a direct. The secondary data can be obtained from official documents, reports, books, records and forms pertaining to this research.

3.5. DATA COLLECTION PROCESS

Related to the qualitative research method, the researcher use the field research technique in order to collect data for this research, in which researchers goes directly to research sites to observe the actual events and circumstances.

Accordingly, the data collection techniques that are used in this research are as follows:

1. Interviews, which is a data collection technique whereby researchers dealing directly with the informants to conduct in-depth question and answer in order to obtain data and information according to the issues being investigated.
2. Documentation, which is data collection techniques in a way to collect / gather material from various documents such as book reports or other written documents related to the problem in this research and later can be used to analyze in greater depth, among other things.
3. Observation. It is done through non-participant observation. It means the researcher will observe and making note about the result.

3.6. RESEARCH INSTRUMENTS

The research instrument is a tool used to collect the appropriate data and information in a scientific survey. Research instruments that used in this research are as follows:



1. Interview guide is a list of questions prepared by the researcher to obtain appropriate information concerning the object being studied.

2. Notebooks and stationery that is used to record data and information obtained in the research location.

3. Other relevant tools that can support the data collection process, such as recording equipment, camera, etc.

3.7. DESIGN OF DATA ANALYSIS

In this research, the researcher uses qualitative analysis method to analyze the data by conducting the research procedures that produce descriptive data analysis, i.e. what is stated by the respondent in writing or verbally are researched and studied as a whole. In this case, the analysis is all about data and information related to the research.

Related to the qualitative analysis method, Huberman B. Miles (1992: 16) stated that data analysis consists of three steps of activities that occur simultaneously, namely: data reduction, data presentation and conclusion or verification. However, before conducting those three steps, the researcher should conduct a preliminary analysis of data collection. Therefore, the qualitative data analysis method use the flow of activities includes:

1. Data reduction, an electoral process, focusing attention on simplification, and data transformation.
2. Data interpretation, defined as a collection of structured information which gives the possibility to withdraw and taking actions. Interpretation of this data will illustrate the direct view of the researcher in accordance with the understanding of the theoretical literature relevant results.



3. Drawing conclusions or verifications, is part of the activities of the intact configuration. The conclusion was also verified during the study lasted. Meanings that emerged from the data will be tested for truth, strength and intelligence validity.

3.8. DATA VALIDITY

To scrutinize the data validity, the research is based on four criteria namely credibility, transferability, dependability, and conformability.

- a. **Credibility** refers to the acceptance of the readers and approval from respondent to the outcome of the research, principally, implementing credibility substitutes the concept of internal validity from non-qualitative. The taken action to examine the credibility of the research is as follows:

- 1) The utilize data derived from qualitative data which are taken from secondary data and primary data.
- 2) Primary data are collected by interviewing informants. Informants are chosen with purposive approach. Interview will be done with some informants including officer of the Department of Agriculture of Malang Regency and other related departments in Malang Regency, East Java Province, Indonesia.

- b. **Transferability** refers to the effort to generalize the research outcome to the wider population by considering the empirical problems which rely on the same perception of contributor and acceptor. Relating to the primary data, the collected data and information is defined by informants who are chosen carefully via estimation or judgment of researcher so that they represent all population and relevant with the research object.



c. **Dependability** refers to the accurate data supported by the evidences which are taken from the locus of the research. To get this thing, the research is completed by tracking the research activities which is documented via notes and collected arches from the research site.

d. **Conformability** refers to the objectivity of the research based on ethics as a tradition of qualitative research. It can be achieved by auditing and examining all components, process, and outcome of the research.

After complying with the requests of data validity, the researcher should make a display of information; some researchers also call this step of process as data presentation or data interpretation. Moreover, Huberman B. Miles (1992:11) gave an explanation related to data display and stated that a display is an organized, compressed assembly of information that permits conclusion drawing action. From that statement can be concluded that the next and very last step is drawing conclusion (drawing and verify). There are many definitions of conclusion, therefore it these can be simply concluded as the closing process from the data analysis. This activity depicts the data, "what happened", phenomena and research conclusion.



CHAPTER IV

SOCIAL SETTING

This chapter explains the condition of community or organizations and nature where the research is conducted. Therefore, this chapter consists of general condition of Malang Regency, local potential of Malang Regency, contribution of local resources toward GDRP and job provision, governmental condition of Malang Regency, and also related local governmental working units which have main responsibilities in achieving sustainable agriculture development in Malang Regency.

4.1. General Description of Malang Regency

The area of Malang Regency is dominated with mountains and hills with an average altitude of 600 meters above sea level. There are 4 high mountains in the regency namely Kelud (1.731 meters), Welirang (3.156 meters), Arjuno (3.339 meters), and Semeru (3.676 meters). Semeru is the highest mountain in Java Island.

Table 4
Malang Regency Border

Direction	Area
North	Pasuruan, Probolinggo, Mojokerto, and Jombang Regency
East	Lumajang Regency
South	Indonesian Ocean
West	Blitar and Kediri Regency

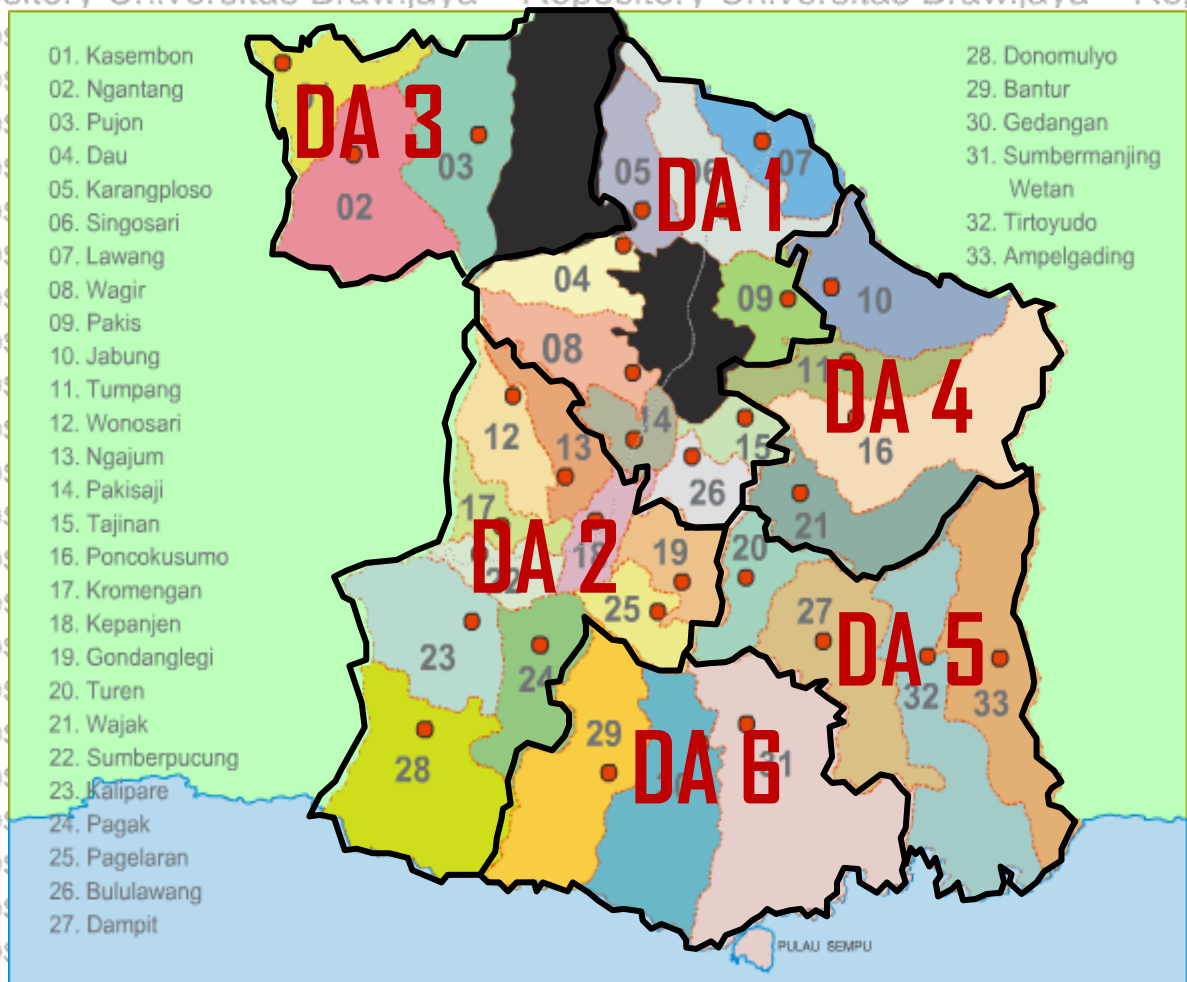
Source: Regional Development Planning Agency of Malang Regency, 2011:2

In addition, there are two cities inside the Malang Regency namely Malang City and Batu City. Mostly, the combination of Malang Regency, Malang City, and Batu City is called Malang Raya.



In order to develop the area, local government of Malang Regency divided the area into 6 development areas (DA) based on their potential resources. DA 1 is the areas around Malang City that consists of Dau, Karangploso, Singosari, Lawang, Pakis, Tajinan, Bululawang, Pakisaji, and Wagir sub-district with the potential on trade and public services sectors. DA 2 consists of Kepanjen, Wonosari, Ngajum, Kromengan, Sumberpucung, Pagak, Donomulyo, Gondanglegi, Pagelaran, and Kalipare sub-district with the potential on governmental services, trade, services, and forestry sectors.

Picture 7
Division of Development Area of Malang Regency



Source: Regional Development Planning Agency of Malang Regency, 2011: 15



DA 3 consists of Ngantang, Pujon, and Kasembun sub-district with the potential on agribusiness, fisheries and animal husbandry sectors. DA 4 consists of Jabun, Tumpang, Poncokusumo, and Wajak sub-district with the potential on agriculture and animal husbandry sectors. DA 5 consists of Turen, Dampit, Tirtoyudo, and Ampelgading sub-district with the potential on fisheries and agriculture sector. DA 6 consists of Bantur, Gedangan, and Sumbermanjing Wetan sub-district with the potential on agriculture, fisheries, and industry sectors. In order to get further understanding, it can be seen in the figure above.

The existence of low pressure trough in the Indonesian Ocean and the existence of the windy area in Banda Sea to Java Sea gave a significant impact to the weather in Malang Regency. Topography of Malang Regency which consists of mountains and hills made the regency as a cool area.

4.2. Local Potential of Malang Regency

Every local government has their own local potential as the resources in developing their own area, so does Malang Regency. This regency has its local potential in several sectors such as agriculture, mining, tourism, trade, water and electricity. This regency also has potential in other sector such as buildings/property, trade, hotel and restaurant, transportation and communication, finance and also services. Those sectors give a significant influent to the economic growth of this regency. These can also be used as the indicator to determine the socio-economic characteristic of the regency.

Land usage in Malang Regency is consisting of agriculture, housing and others such as industry and mining. Considering its major economic sector is agriculture and most of the society's job is in agriculture sector, Malang Regency



has large agriculture land which is approximately 70% of its area. While other sectors use only a little part of this area.

Table 5

Land Usage of Malang Regency

No	Usage	2009 (%)	2010 (%)	2011 (%)
1	Agriculture	75	77,93	72,36
2	Housing	2	1,82	22,67
3	Others	23	20,25	4,97
Total		100	100	100

Source: Regional Development Planning Agency of Malang Regency, 2012:81

From the table above, it can be seen that the major land usage in Malang Regency is for agriculture sector. Even the amount is fluctuated every year and tends to be decreased in 2011, but it still uses around 70% of total area of this regency. The reduction of the amount of agriculture is maybe caused by the conversion of agriculture area to housing area, as shown by the table that land usage for housing area increase rapidly in 2011.

As stated above that related to its geographical condition, an agriculture sector is the major sector in this regency and has the biggest contribution toward economic development in this region. This sector also has important roles in community welfare and provides occupation to the society. But, the condition of this sector tends to decreased year by year.

Many definitions of agriculture and every definition have their own meanings and influence the understanding of the people. Malang Regency defines agriculture as all activities that related to maintaining and picking up the living and biologic materials from the nature for fulfilling daily needs or sold to the other people or sectors, and not including the hobbies activity (even the hobbies



are related to agriculture) (Regional Development Planning Agency of Malang Regency, 20011:16).

In general, agriculture activities are consisted of the activities such as fishing, planting, breeding, maintaining and taking forest product including animal. While Malang Regency determines agriculture sector is consist of several sub-sectors namely food plantation, garden plantation, animal husbandry and its product, forestry, fishery, and agriculture services (Regional Development Planning Agency of Malang Regency, 2011: 16).

Agriculture is therefore a foremost sector in the Malang Regency's economy. According to the Department of Agriculture and Plantation, most of the Malang Regency area is dominated by agricultural land, namely 15,44% (49.519 hectare) wetland, 30,77% (98.685 hectare) field/ garden, 6,11% (19.578 hectare) plantation area, and 2,91% (9.325 hectare) forest.

In order to support the agricultural resources, the local government established irrigation networks including permanent dam, water building, water resources, sluice, and water bearer channels dedicated to provide irrigation of 43.202 hectare of paddy field. Most of the irrigation network is technical irrigation irrigating about 27.808,50 hectare (64,37%) of paddy field. While, semi technical irrigation irrigated 6.179,50 hectare (14,30%), and simple irrigation irrigated about 9.214 hectare (21,33%). According to the data of Department of Irrigation, in 2010, there was no land use transfer.

Food production, especially rice production in 2010 reached 450.685 ton an increase over the previous year, even compared to 2008. Maize and cassava as substitute commodities also rose. Meanwhile, crops commodities such as sweet potatoes, soybeans and peanuts have increased as well.



The increasing in rice production in 2010 was supported by some buffer areas including Dampit, Turen, Kepanjen, and Singosari sub-district. Meanwhile, the other buffer areas that continue to provide its share are Donomulyo, Pagelaran, Sumberpucung and Pakis sub-district.

Besides rice and crops commodity, other commodities covered in the potential food products is horticulture. According to Department of Agriculture and Plantation of Malang Regency, there are 20 vegetables and 20 fruits commodities potentially developed in Malang Regency. Generally, the vegetable production in 2010 increased, while the fruits production fluctuated from year to year.

Some of community plantations recorded in the Department of Agriculture and Plantation are cloves, coffee, sugarcane, coconut, kapok, and tobacco. Plantation community commodity was generally concentrated in the South areas of Malang Regency except sugarcane, kapok, and tobacco. Almost all of the community plantation production in 2010 was increased except cloves and sugarcane production.

The main products of community wood are teak, mahogany, mindi, sengon, and sonokeling. In 2010 nearly all wood products declined except mindi, acacia, and sengon production. Mindi production in 2009 reached 4.204,80 cubic meters, and then rose to 4.808,84 cubic meters in the next period, Acacia rose from 8.492,71 cubic meters to 9.163,62 cubic meters, and sengon rose from 78.495,52 cubic meters to 78.691,95 cubic meters. Similar with the plantation commodity, most of the teak productions were made by society in South of Malang Regency, while the other wood productions were spread evenly.

Population and livestock productions (meat, egg, and milk) in 2010 generally increased. The main livestock of Malang Regency was cattle, both dairy



and beef cattle. The cattle population increased from year to year. From the population of 72.755 dairy cattle, about 27.711 (38,09%) of them existed in Pujon sub-district. While the beef cattle were spread evenly around Malang Regency areas.

The amount of fishing fleets also increased from year to year. In 2010, the fishing fleets increased about 3,58% consisting of 45,16% motor ship, 33,07% outboard motor, and 21,76% kuntingan. The fisherman generally used some gears including fishing rod (32,10%), and net (47,81%). Their production came from some sources, namely marine catches about 9.100,82 (84%), cultivation about 13%, and catching freshwater about 2,56%.

4.3. Contribution of Local Resources toward GDRP and Job Creation

4.3.1. Contribution toward GDRP

Related to its geographical condition that this regency is surrounded with mountains and most of its area is mountainous area, so this regency has a big potential in agriculture sector. More than 50% of its area is agriculture land with most of the society's occupation is in agriculture sector. Agriculture sector is the major sector that gives the biggest contribution in economic structure of Malang Regency.

According to the Document of Malang Regency in Figures, a report concerning development result that is published twice a year by Regional Development Planning Agency of Malang Regency, since 2008 up to present, agriculture sector has become the main contributor toward GDRP of Malang Regency. Even though its contribution is decrease year by year, this sector

contributes around 29% up to 30% every year. While the other sectors have contribution not more than 24% every year.

Table 6

Contribution of sectors toward GDRP

No	Sector	2008 (%)	2009 (%)	2010 (%)	2011 (%)
1	Agriculture	30,47	30,87	30,25	29,60
2	Mining	2,69	2,73	2,75	2,69
3	Industry and Manufacture	18,35	17,92	18,27	18,60
4	Electricity and Water	1,55	0,71	0,73	0,73
5	Buildings/ Property	1,68	1,73	1,78	1,88
6	Trade, Hotel, Restaurant	23,99	25,50	25,60	26,04
7	Transportation and Communication	4,38	3,21	3,33	3,25
8	Finance, Rental and Company Service	3,85	4,17	4,23	4,28
9	Services	13,04	13,08	13,08	12,94

Source: Regional Development Planning Agency of Malang Regency, 2012:16

From the table above we can see that agriculture sector gives the biggest contribution toward GDRP every year. This gives contribution approximately 30% per year. It proves that this sector is the major potential of this regency, and should be developed as the priority. Unfortunately, this contribution toward GDRP is decreased year by year. From the table above we can see that the contribution of agriculture sector toward GDRP is decreased, while other sectors such as industry, trade, hotel and restaurant are increased. Several other sectors such as buildings/property and finance are also increase. This condition is like giving a signal that the agriculture sector tends to be shifted by other sectors.



4.3.2. Contribution toward Job Provision

Considering the agriculture sector as the major sector of Malang Regency, this condition influences the ability of this sector in providing job for the people in this region. Furthermore, this sector should also give a big contribution toward society's welfare compared with other sectors. This can be seen in the table below.

Table 7
Society's Job of Malang Regency

No	Sectors	2008 (people)	2009 (people)	2010 (people)	2011 (people)
1	Agriculture	462.658	444.771	488.065	488.065
2	Mining	4.445	4.198	4.608	4.608
3	Industry and Manufacture	219.255	204.677	195.119	195.119
4	Services	133.103	125.664	137.917	137.917
5	Others	381.934	443.514	382.514	382.514
	Total	1.201.395	1.222.764	1.208.223	1.208.223

Source: Regional Development Planning Agency of Malang Regency, 2012:20

From the table above we can see that the agriculture sector provides a big opportunity for the society. Almost 50% of the society of Malang Regency have job in this sector. So, it can be concluded that agriculture sector is the most important sector that should be developed and maintained well. It is because if agriculture sector collapse, so many people will be jobless and suffer.



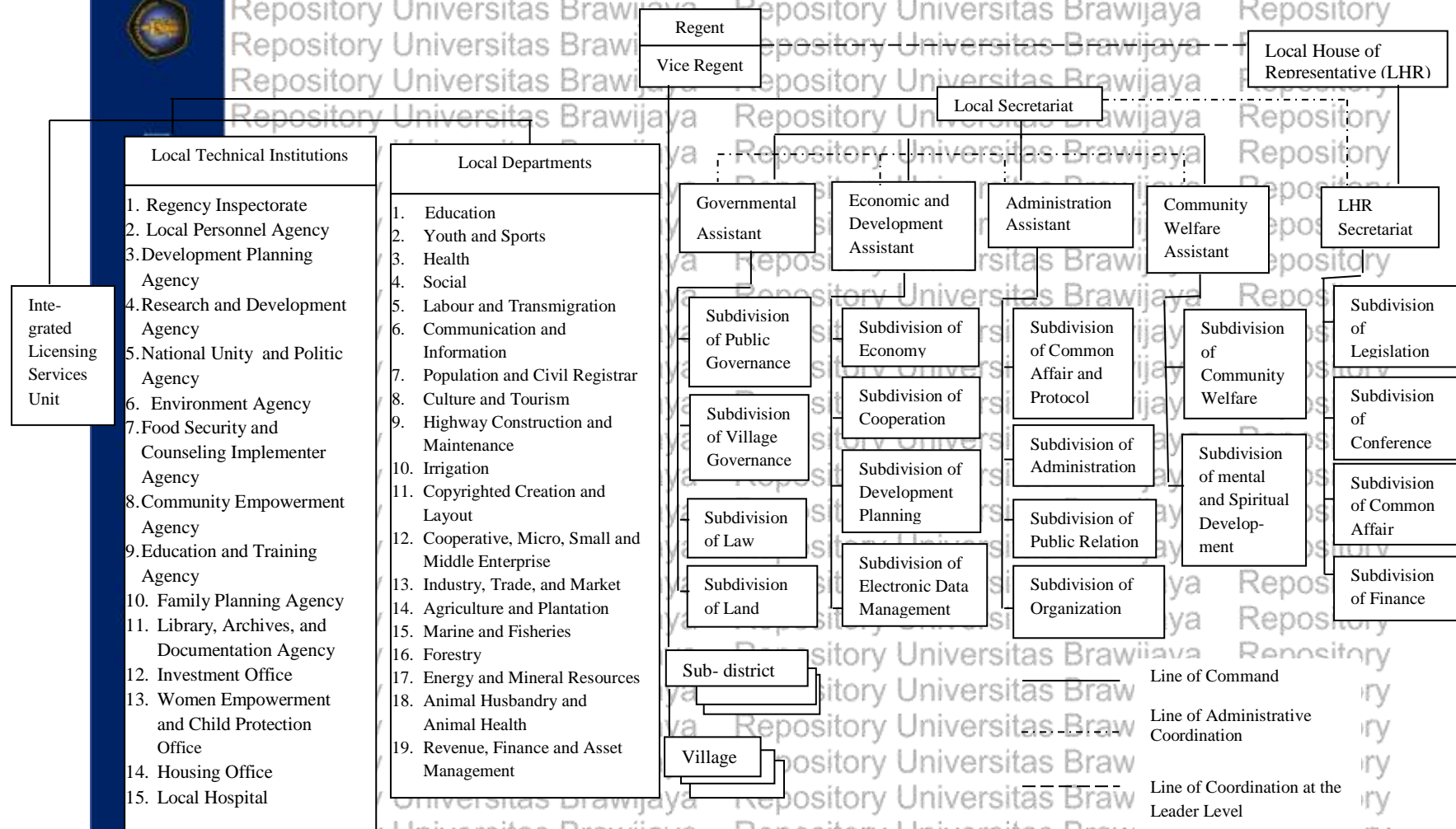
4.4. Governmental Condition of Malang Regency

Malang Regency is the second largest of 38 regencies and municipalities in East Java Province, with the center of government is in Kepanjen sub-district.

In the past, Batu City was included in the Malang Regency, but in 2001 it was separated after designated as a city. This regency consists of 33 sub-district (*Kecamatan*) which is divided again into 378 villages and 12 *kelurahan*. Furthermore, each *desa* and *kelurahan* is divided into several smaller groups in order to be able to implement and formulate the development programs properly.

This regency is a region that is headed by a regent. In order to carry out its tasks and functions, this regency is helped by 19 agencies and 15 technical institutions, and also a local secretariat that consist of four sub-divisions namely common affairs and protocols, public relations, organization, and administrative sub-division. In the field of social welfare there are 2 subsections, namely mental and spiritual development and also community welfare. In the field of economic and development there are 4 subsections namely economy, cooperation, electronic data management and development planning. The last, in the field of Governmental Assistant there are 4 subsections also, namely public governance, village governance, law, and land affairs. In order to carry out their tasks and functions related to licensing, those departments are helped by a certain unit, namely Integrated Licensing Services Unit.

Picture 8
Governmental Structure of Malang Regency



Source: Regional Development Planning of Malang Regency, 2011:21



From the chart above can be seen that Malang Regency has job and authority division among regent and vice regent, departments, agencies, and Local Legislative Assembly as other regencies and municipalities in Indonesia. This aims to be able to run development and governmental affairs properly and avoid overlapping tasks and authorities that can impede the success of the development.

4.5. Related Departments and Agencies in Promoting Sustainable Agriculture Development.

In order to be able to run development and governmental affairs properly, the most important thing is a good relationship and cooperation among all components of governmental structure, especially the components that has a main task related to certain matter of development, for example is in the matter of agriculture development.

Making reference to the definition of agriculture determined by The Government of Malang Regency, which stated that agriculture sector is consist of several sub-sectors namely food plantation, garden plantation, animal husbandry and its product, forestry, fishery, and agriculture services (Regional Development Planning Agency of Malang Regency, 2011: 16), there are several main departments and several additional agencies and department has responsibility in developing agriculture sector, especially in promoting sustainable agriculture development in Malang Regency.

Those main departments are Department of Agriculture and Plantation, Department of Animal Husbandry and Animal Health, Department of Marine and Fishery, and Department of Forestry. While the additional agencies and



department related to this matter are Environmental Agency, Food Security and Counseling Implementer Agency and Department of Irrigation.

4.5.1. Department of Irrigation

According to the Document of Strategic Planning of Department of Irrigation for the period of 2011-2015, Department of Irrigation is an operational agency of Malang Regency Local Government in term of irrigation led by a leader who is under and responsible to the Regent through Local Government Secretary. This department is responsible for helping the Regent in governing and developing local area particularly in Irrigation affairs. In addition it also has responsibility to implement the central and provincial government's policies.

Organizational structure of Irrigation Department of Malang Regency is built under the Regent Regulation No. 13/2008 concerning The Local Personnel Organization of Irrigation Department as a follow up of the implementation of local autonomy in order to strengthen the authority, efficiency, effectiveness, institutional performance, human resources improvement, and management information. According to this regent regulation, this department is not the agent of central and provincial government. Therefore, the department is responsible to the head of local government through local government secretary. In order to do its tasks, the Irrigation Department has some divisions

Division of Water Resources Development and Conservation focuses its job to develop and recover the irrigation and water resources in Malang Regency by doing collection and identification of water resources and



irrigation, development, management and conservation of water resources, survey, mapping and planning of water resources and irrigation. Division of development has tasks to perform some Irrigation Department's tasks related with verification and quality monitoring, development, improvement, rehabilitation, and restoration of disaster impact related with water resources and irrigation. Therefore, this division has important role to develop water resources and irrigation cooperate with the Water Resources Development and Conservation as well as conduct monitoring to the development process. While Division of Operation and Maintenance responsible for operate and maintain water resources and irrigation as well as manage it. The last is Division of Usage. This division responsible for using water resources, irrigation, public services, controlling, evaluation, and illumination of water resources, irrigation, and organization. Besides conducting the special tasks, each division also has responsibility to conduct the other appropriate responsibilities given by the head of Irrigation Department. These divisions indicate that Irrigation Department performs data collection, development, maintenance, and usage of water resources and irrigation. Each division is led by a head of division. In order to support its work, each division is helped by three sub divisions (see appendix 1).

According to the Strategic Planning of Irrigation Department, this department has 221 employees consisted of: 2 prospective civil servants, 192 civil servants, and 27 non civil servants (Department of Irrigation of Malang Regency 2011: 8). Comparing with another department, the Department of Irrigation has more enough employees to manage water resources in their responsible area. However, the human resources still need to be developed. It

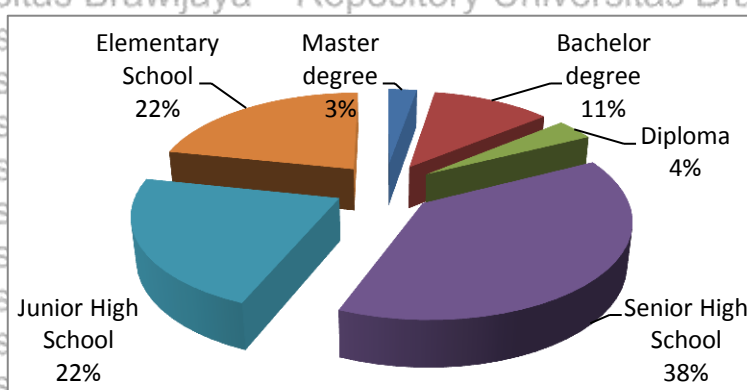


is because most of the Department's employees were not graduated from higher education. It can be seen in the picture below.

Picture 9

Human Resources of Department of Irrigation

According to Educational Level of the Employees



Source: Department of Irrigation of Malang Regency 2011: 11

There are only 39 employees or 17,65% of the total employees graduated from higher education (master, bachelor, and diploma). While, the remain 182 employees or 82,35% of the total employees were only graduated from senior high school, junior high school, and elementary school. Therefore, their quality should be developed in order to achieve better performance.

4.5.2. Department of Animal Husbandry and Animal Health

As stated on the Document of Strategic Planning Development of Department of Animal Husbandry and Animal Health 2011-2015, Department of Animal Husbandry and Animal Health is created under the Local Regulation of Malang Regency no. 1/2008 concerning the Local Personnel Organization and the Regent Regulation no. 21/2008 concerning the Local Personnel



Organization of Department of Animal Husbandry and Animal Health is implementing element of regional autonomy in the areas of livestock and animal health. The department is led by a leader in performing its duties under and responsible to the Regent through local secretary. This department is responsible to perform some of local government's tasks in the areas of livestock and animal health under decentralization and co-administration system. In addition, the Department is also responsible to do other appropriate tasks given by the Regent.

Department of Animal Husbandry and Animal Health has 4 divisions for conducting its operational duties and policy implementation, namely: Division of Production Department, Division of Livestock Business Development, Division of Human Resources and Institutional Development, and Division of Animal and Society Health. Each division is led by a leader who is under and responsible to the head of the department. They also have 3 sub divisions to do their task easier (see appendix 2).

In order to manage animal husbandry and health, the Department of Animal Husbandry and Animal Health has 132 employees which consist of 56 civil servants, 2 prospective civil servants, 74 temporary employees. It can be conclude that most of the Department's employees are temporary employees. The Department only has 58 permanent employees or about 43,93% of all employees.

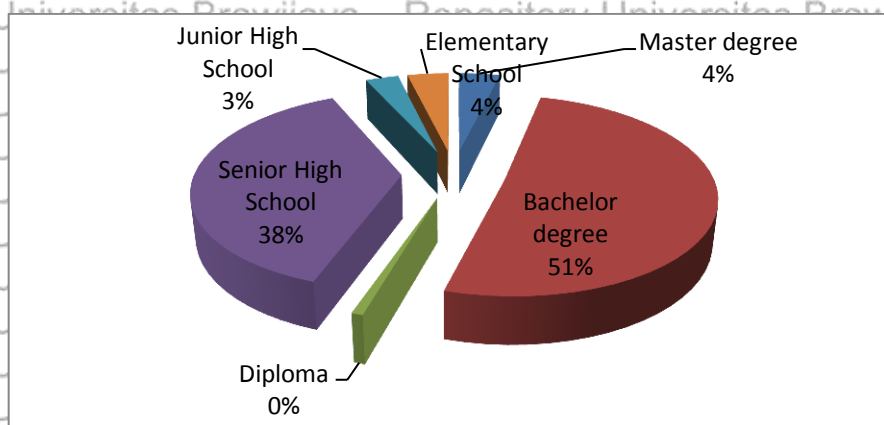
Therefore, in term of quantity, the Department should develop its employees to be able to perform better. Most of the Department's employees graduated from bachelor degree and only one employee graduated from diploma. In addition, there are 50 employees or about 38% of them graduated



from senior high school. Although, most of them are temporary employees about 35 employees or 70% of the all of the employees graduated from senior high school. In order to make clearer, it can be seen in the picture below.

Picture 10

**Human Resources of Department of Animal Husbandry and Animal Health
According to Educational Level of the Employees**



Source: Department of Animal Husbandry and Animal Health 2011 : 9

From the picture and explanation above we can define that the Department's quality is good enough because the Department has more qualified employees. There are only 3% – 4% employees graduated from low level of education. Moreover, the Department has 4 employees graduated from master degree. However, the Department still needs to develop its employees to achieve better performance.

4.5.3. Department of Agriculture and Plantation

Department of Agriculture and Plantation plays a strategic role in the development of local economic in Malang Regency through the provision of foods and industrial raw materials, reducing unemployment, and



environmental protection. The Department is established under Local Regulations no 17/2008 concerning the Local Personnel Organization of Department of Agriculture and Plantation. The Department has major task to perform its authority in the area of agriculture and plantation. Similar with the other departments, the Department of Agriculture and Plantation must also conduct other appropriate tasks given by the Regent.

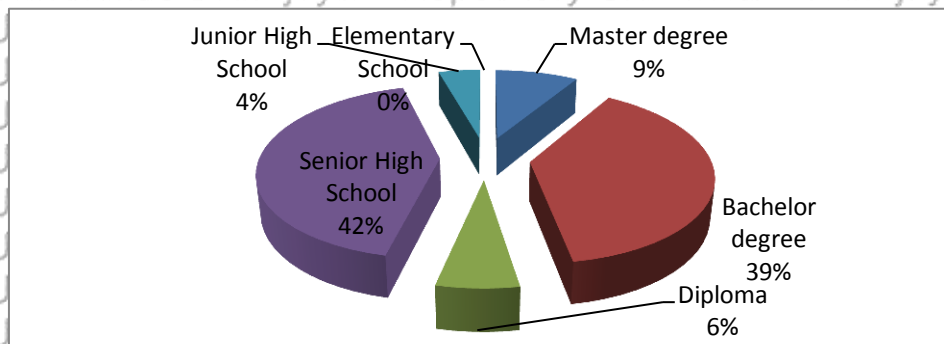
Department of Agriculture and Plantation is an implementation element of Malang Local Government in the area of agriculture and plantation. This department is divided into 4 divisions which are under and responsible to the head of Department, namely: Division of Food Production and Horticulture, Division of Plantation Production, Division of Processing and Marketing of Harvest, and Division of Agricultural Business (see appendix 3).

In order to manage agriculture and plantation resources in Malang Regency, the Department of Agriculture and Plantation has 114 employees. Most of the employees graduated in bachelor degree about 44 employees (38,6%) and senior high school about 48 employees (42,11%). The Department of Agriculture and Plantation is the only one department dealing with agricultural development which is not has employees who are graduated in elementary school. In order to get further understanding, it can be seen in the picture below.



Picture 11

Human Resources of Department of Agriculture and Plantation According to Educational Level of the Employees



Source: Department of Agriculture and Plantation of Malang Regency, 2011: 8

From the picture above, we can see that there are balance of employees amount between employees graduated in higher education and basic education. There are 61 employees or about 53,5% of the total employees. While, the amount of employees graduated in basic education is about 53 employees or about 46,5 % of the total employees. Therefore, the Department should develop its human resources.

4.5.4. Department of Forestry

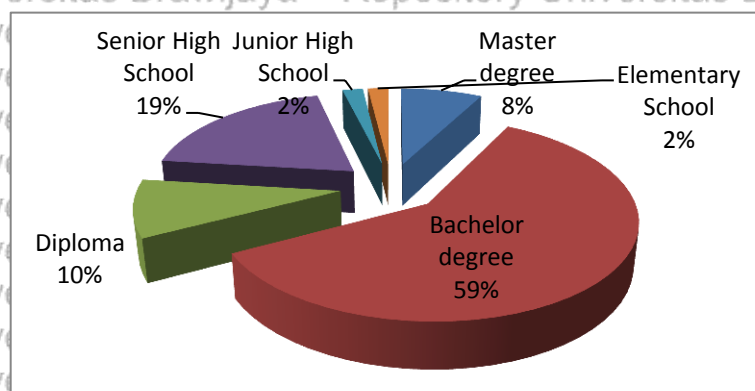
Forestry has a critical role to the economic development of the community especially the community around forest. It can also maintain and increase the quality of environment related with the stability of water, soil, and air system as a major element of life. Therefore, under the Regent Regulation no. 19/2008 Local Government of Malang Regency established the Department of Forestry as a tool of the Local Government to manage and develop forestry in that area.



In order to support those tasks, the Department of Forestry established 4 divisions namely: Division of Forest Cultivation, Division of Land and Forest Rehabilitation, Division of Forest Management and Protection, and Division of Forestry Counseling. Each division consists of 3 sub divisions which has responsibility to support the division to implement the department's policies. Each division is led by a leader who is under and responsible to the head of department (see appendix 4).

As described in the previous section that Malang Regency has potential and many resources particularly in term of forestry. Therefore, the local government has to provide qualified human resources to manage forestry. However, in order to manage that resource, Department of Forestry has limited employees. This department has only 52 employees which consist of 4 employees graduated in Master degree, 31 employees graduated in Bachelor degree, 5 employees graduated in Diploma, 10 employees graduated in Senior High School, 1 employee graduated in Junior High School, and 1 employee graduated in Elementary School. It can be seen in the picture below.

Picture 12 Human Resources of Department of Forestry According to Educational Level of the Employees



Source: Department of Forestry of Malang Regency, 2011:16



From the picture above we can state that Most of the employees graduated from higher education. There are 76,92% employees graduated from higher education and the rest of 23,08% employees graduated from Senior High School, Junior High School, and Elementary School. It is good for developing department in order to manage forestry because most of the employees graduated in higher education particularly bachelor degree.

4.5.5. Department of Marine and Fisheries

Malang Regency is a big area. Most of the areas are located in the rural area. Therefore, the Regency has many natural resources included marine and fisheries resources. In order to manage its resources, Local Government established the Department of Marine and Fisheries under the Regent Regulation no. 18/2008 concerning the Local Organization of the Department of Marine and Fisheries. According to the regulation, the Department of Marine and Fisheries is an implementing elements of Local Autonomy in the area of marine and fisheries. Therefore, the Department has responsibility to perform the local government affairs in the area of marine and fisheries according to the system of decentralization and co-administration.

The Department of Marine and Fisheries consists of Secretariat and 4 divisions, namely: Division of Aquaculture, Division of Marine and Fisheries Resources, Division of Services and Human Resources Development, and Division of Marine and Fisheries' Business. Division of Aquaculture is responsible to develop aquaculture. Division of Marine and Fisheries Resources is responsible to manage and develop marine and fisheries resources. Division of Services and Human Resources Development is



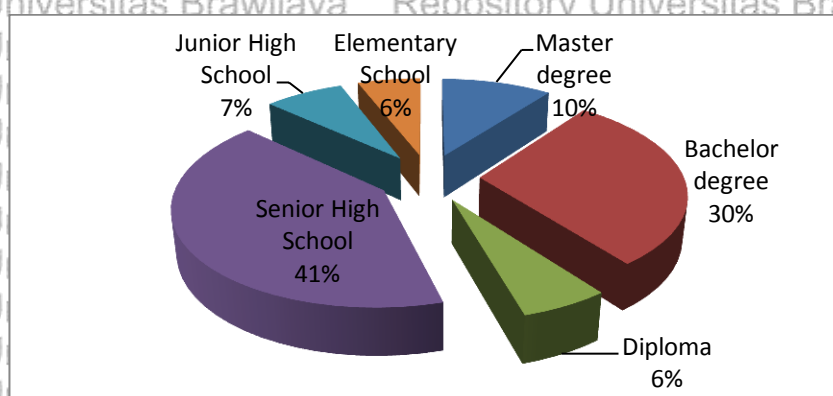
responsible to provide data and information of the development of human resources and institution, as well as food security. While, Division of Marine and Fisheries' Business is responsible to provide the marine and fisheries business services (see appendix 5).

In term of human resources, Department of Marine and Fisheries has 68 employees consisting of 28 employees graduated from senior high school, 7 employees graduated from master degree, 20 employees graduated from bachelor degree, 4 employees graduated from diploma, 5 employees graduated from junior high school, and 4 employees graduated from elementary school.

Picture 13

Human Resources of Department of Marine and Fisheries

According to Educational Level of the Employees



Source: Department of Marine and Fisheries of Malang Regency, 2011 :17

According to the picture, we can conclude that the human resources of the Department of Marine and Fisheries' employees need to be developed. It is because most of them only graduated from Senior High School. That means that their education is only minimum standard. This condition has a potential in impeding the success of development.



4.5.6. Food Security and Counseling Implementer Agency

Malang Regency is agricultural and marine area. Therefore, Malang Regency has a wide community forest with the high biodiversity. It is a fundamental capital for achieving food security. In order to managing those resources, Local Government of Malang Regency established the Food Security and Counseling Implementer Agency under the Regent Regulation No. 29/2008 concerning Local Organization of Food Security and Counseling Implementer Agency. The Agency has played role in controlling food distribution, formulating policies of food security, controlling quality and food safety, and development of alternative foods, also empowering the farmer communities.

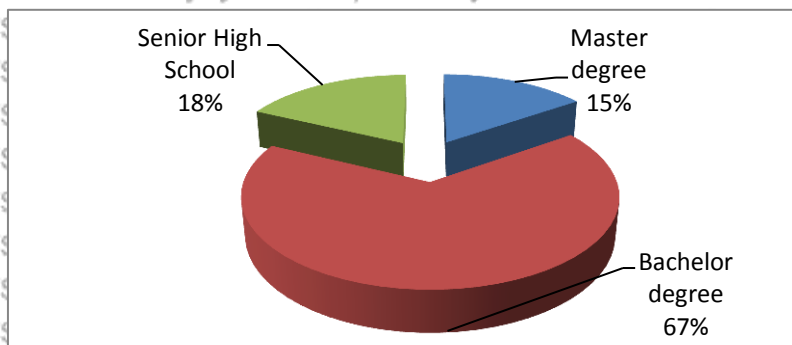
In order to perform its roles, the Agency established 4 divisions, namely Division of Food Availability and Distribution, Division of Consumption and Food Diversity, Division of Counseling Program Development, and Division of Human Resources and Institutional Development (see appendix 6).

The Food Security and Counseling Implementer Agency Environment Agency is new agency because it was established on 2008. Therefore, this agency still has limited employees. Recently, the Department has 39 employees which most of them graduated from bachelor degree. The insufficient number of employees makes this department face some difficulties to perform annual activities.



Picture 14

Human Resources of Food Security and Counseling Implementer Agency According to Educational Level of the Employees



Source: Food Security and Counseling Implementer Agency, 2011:19

From the above explanation, we can conclude that the Department has enough employees if we look at the educational classification. But, it still need to be developed in term of the amount of the Department's employees. The Department should recruit many employees particularly someone whose graduated from higher education. It will make the organization easier to manage the local resources and its employees.

4.5.7. Environment Agency

Environment Agency of Malang Regency is a local technical institution with its main duties in protecting and supervising environment, also prevent and control air, water and land pollution in this regency. This agency also plays role in investigating and determining the pollution level in this regency. In order to be able to run its main duty properly, this agency divided into several divisions (see appendix 7).

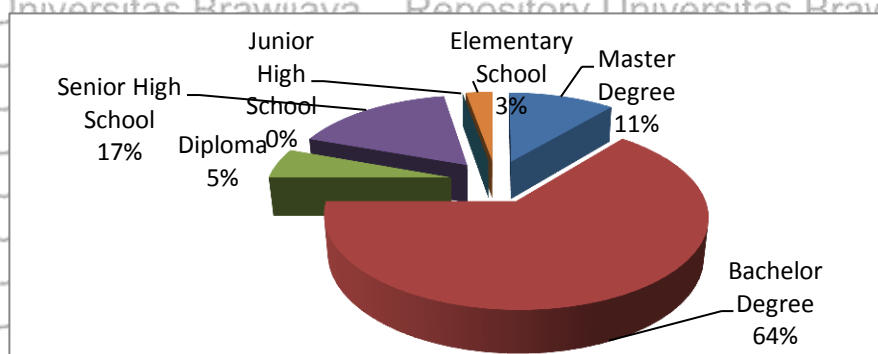
Environment Agency has 37 personnel which consist of 16 people for structural function, 13 for civil servant staff position and 8 people for contract



staff position. Most of the personnel have graduated from bachelor degree and senior high school; it can be seen in the picture below.

Picture 15

Percentage of Personnel Educational Level of Environment Agency



Source: Environment Agency of Malang Regency, 2011:21

From the chart above, it can be seen that there are 11% of the personnel of Environment Agency graduated from Master Degree, while 64% of the personnel of this agency graduated from Bachelor Degree. The second larger amount of personnel graduated from Senior High School, it is 17%. The rest of them are consisting of 5% graduated from Diploma and 3% or 1 person graduated from Elementary School. This agency does not have the personnel who graduated from Junior High School.



CHAPTER V

RESULT AND DISCUSSION

This chapter consists of the result of the research and also provides an analysis of that result by using the theories which has been explained in literature review in order to answer the research questions. Therefore, the efforts of local government in achieving sustainable agriculture and community empowerment, also the supporting and inhibiting factors for local government in achieving sustainable agriculture and community empowerment in Malang Regency.

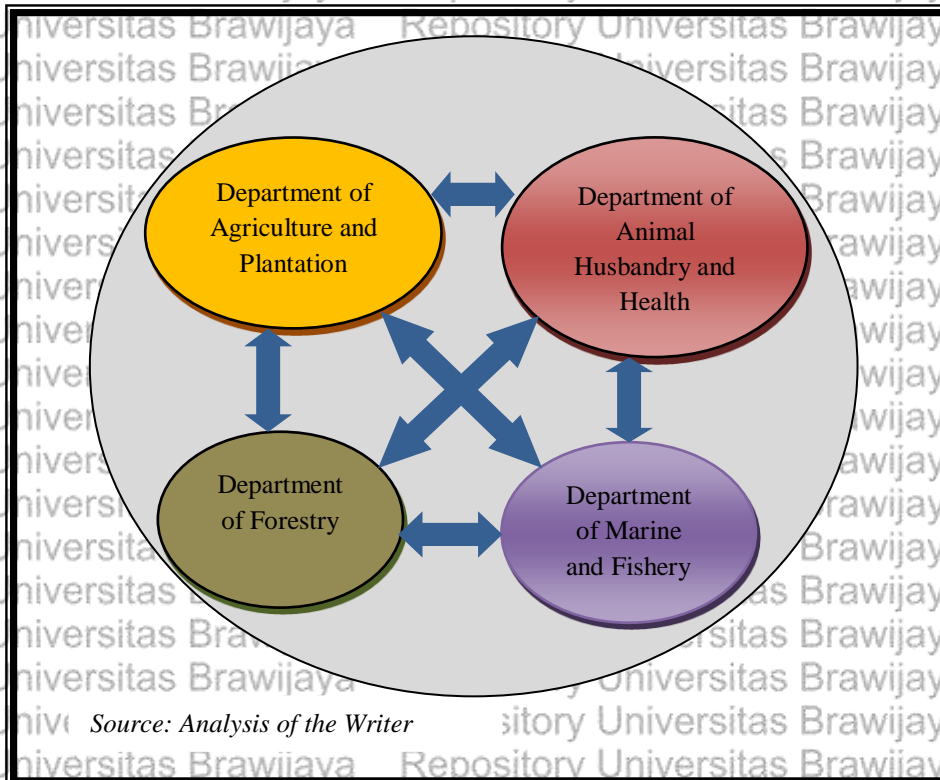
5.1. Agriculture Development in Malang Regency

Local Government of Malang Regency in its Document of Gross Regional Domestic Product of 2010 has defined that the scope of agriculture based on local government of Malang Regency which states that agriculture consist of crop and plantation, forestry, animal husbandry, and fishery. Taking a consideration to the scope of agriculture itself and also to the governmental structure of Malang Regency, it can be concluded that there are at least 4 main local governmental working units that has main responsibility to develop agriculture sector in this regency, namely Department of Agriculture and Plantation, Department of Animal Husbandry and Health, Department of Forestry, and Department of Marine and Fishery.



Picture 16

Main Related Departments in Developing Agriculture Sector in Malang Regency



In order to be able to develop agriculture sector well and properly those 4 main related departments should integrated and cooperate each other. Without integration and good cooperation, the agricultural sector in this regency will be difficult to be developed. Furthermore, this sector will not be able to increase the welfare of the society, especially farmer community.

According to the annual report of those departments, during 2011, the Government of Malang Regency through those related local governmental working unit has conducted many efforts in order to develop agriculture sector in this regency. In general, those efforts can be classified in some types as explained below.



5.1.1 Institutional Strengthening

Institutional strengthening here is conducted by creating farmer groups and giving counseling and developing human resource of the farmers in order to empower farmer communities so that they can be more independent and can access their agricultural needs easier and cheaper, also have knowledge concerning the important of natural preservation for their agricultural business. This system is suitable with the principle of sustainable development which requires social aspect development through empowering the community along with increasing economic and preserve natural ecosystem.

5.1.2 Natural Protection and Conservation

Natural protection and conservation is conducted most by Department of Forestry and Environment Agency by planting trees, pollution control and water resources conservation which are threatened by the activities which focus only on increasing economic income. This system is along with the principle of sustainable agriculture development which requires more consideration for natural aspect that might be damaged because of the previous focus in increasing economy and ignoring environmental sustainability.

5.1.3 Human Resources Development

Human Resources Development in Malang Regency is conducted by almost all related local governmental working units in order to increase the quality of human capital to be more knowledgeable and independent which finally it can increase farmer's welfare. This kind of development strategy is in line with sustainable agriculture principle which requires



social aspect to be more considered by empowering society to be more independent.

5.1.4 Giving Capital Assistance

Giving capital assistance is conducted by almost every related local governmental working unit in order to increase productivity and value of agricultural products, for example agricultural product processing and marketing equipment also superior seeds. Some of the equipment procurement comes from national and provincial government. This capital assistance is always given as a grant to selected farmer or farmer group. Except financial capital assistance where the local government only pays some interest that should be paid by the farmers to the selected financial agency.

This system will create a dependency of the farmer to the government, and make it growing higher. It is because the farmers will not have big sense of belonging responsibility to take care and use maximally that equipment. Furthermore, this system will impede the achievement of sustainable agriculture in this regency, because sustainable agriculture development require independent farmer to develop agriculture sector, while independent farmer can be created by empowering the farmer and reducing their dependency toward other stakeholders.

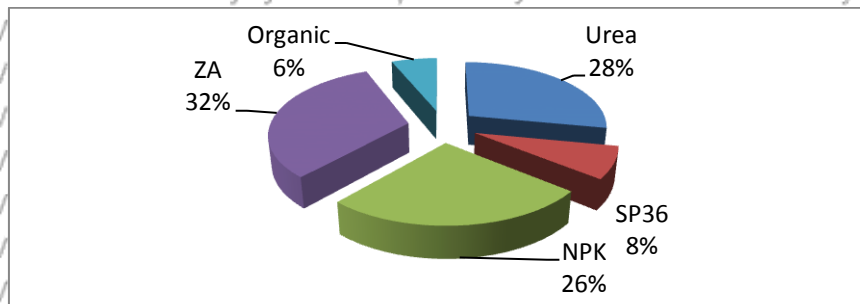
5.1.5 Chemical Usage

Chemical Usage is still implemented in Malang Regency in order to develop agriculture sector. This chemical input uses in the form of fertilizer and pest trap in order to eradicate pest that destroy agricultural plant. During 2011, the chemical fertilizer usage in this district is

about 94%, while organic fertilizer usage is only about 6% of the total fertilizer usage.

Picture 17

Fertilizer Usage in Malang Regency in 2011



Source: Department of Agriculture and Plantation of Malang Regency, 2011:6

In the principle of sustainable agriculture development, the chemical input must be reduced, even removed and replaced by the usage of organic input. It is because chemical input will decrease soil fertility which causes this land cannot be used for agriculture anymore and make agriculture sector unsustainable.

5.1.6 Agricultural Infrastructure Strengthening

Agriculture Infrastructure Strengthening in Malang Regency is conducted especially by Department of Agriculture and Plantation and Department of Irrigation, for example by constructing agriculture roads and irrigation network. This construction is supporting the principle of sustainable agriculture development because it focuses on economic improvement and also preserve natural resources by using irrigation system and implementing irrigation network management, so the water can be used equally without any exploitation that can damage the nature.



As stated in the previous chapter and some previous researches that sustainable agriculture development tries to increase economic aspect while preserving the nature so that the agriculture practice can give a positive impact toward social condition of the society, especially the farmers. Moreover, in the previous researches stated that education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues, while improving the capacity of the people is the essence of empowerment approach.

Reviewing the classification of the efforts conducted by Local Government of Malang Regency in developing agriculture sector, there are 2 major kinds of those classification. The first is the effort that support sustainable agriculture development and lead to farmer empowerment, for examples are natural protection and conservation, also human resources development. The second is the efforts that do not support sustainable agriculture development and do not lead to farmer empowerment, for examples are the chemical usage and giving capital assistance.

5.2. Sustainable Agriculture Development in Malang Regency

Taking into account that sustainable development theory emerged after the last economic paradigm that focused only on increasing economic aspect has proven resulting social and environmental degradation where it condition threaten the ability of future generation in meeting their needs, sustainable development theory requires social and environmental aspect to be considered equally as economic aspect.



In sustainable development theory stated that sustainable development consist three aspects that influence each other and should be considered equally, namely economic, social, and environmental (Suryana, 2005:45). This theory requires that development activity should be able to increase economy along with increasing social capital by empowering society while preserve the nature.

While many literatures stated that the concept of empowerment is an alternative concept of development, therefore both empowerment and development aim to achieve better quality of life which finally leads to the achievement of welfare. This statement is based on the fact that the previous approach of development which only focused on economic growth has created many negative impacts as the problems that need to be solved, for the example are natural destruction and un-well distribution of development results.

Furthermore, this condition creates a big gap between capitalist and lower-middle class, where the capitalist with their capital has big power to access all facilities in order to achieve their welfare, even their big power can control over the powerless which is dominated by lower-middle class society who can only access limited facilities just to survive by being lower-class workers and still far for achieving welfare. In addition, this condition creates dependency of lower-middle class toward capitalist, and this dependency made the capitalist can control over the lower-middle class easily.

The concept of empowerment emerge to answer the problem that caused by the implementation of development paradigm which emphasized on economic growth. Through human development approach which is brought by the concept of development, the powerless people can increase their ability by acquiring of and strengthening skills and knowledge, also considering their participation in



development process that can make them strong enough to participate in a variety of control over, which in turn make them free from the dependency toward others. In another word, empowerment aims to deliver the community to the process or stage of independence by increasing people's knowledge, skill and ability in meeting their needs and participating development activities; it should not trap the people into the dependency trap. Empowerment concept which emphasized on human development viewed as a proper and effective approach of development where human itself as the subject and object of development process.

Taking a consideration toward sustainable development theory and empowerment theory, it can be seen that these two theories has very close relationship and influence one another. Empowerment theory views that human is the center of development process that should be developed first. While sustainable development requires the integration of economic, social and environmental aspect and considering these aspects equally. This social development usually refers to the improvement of both individual well-being and the overall social welfare by empowering community through increasing knowledge and skill.

This principle also applies to sustainable agriculture development as the implementation of sustainable development in agriculture sector. In this case is can be said that sustainable agriculture development is the concept which tries to achieve increase of farmer economy while empowering farmer society and preserve agricultural land. Taking a consideration toward the close relationship between sustainable development theory and empowerment theory, and these



two theories influences one another, farmer empowerment is very important to be conducted in order to achieve sustainable agriculture.

Malang Regency promotes sustainable agriculture development as the implementation of sustainable development in agriculture sector. This is as stated in the Middle Term Development Planning of Malang Regency 2010-2015, which is in chapter VI point 6.3 section 8c number 1 of this document stated that the principles of sustainable development is mainstreamed into all areas of development. The requirement to promote and implement sustainable development also stated in other legal frameworks such as Local Regulation of Malang Regency Number 7 of 2010 on Control of Pollution and Environmental Damage, and also Local Regulation of Malang Regency Number 6 of 2008 concerning Long Term Development Planning 2005-2025. It means that this regency must implement sustainable development in all development sectors including agriculture.

Taking a consideration that farmer empowerment is one of very important factor that influences the success of sustainable agriculture in Malang Regency, as mandated by National Government through National Regulation Number 16 of 2006 concerning the grouping of counselor into a certain local governmental working unit, this regency also created Food Security and Counseling Implementer Agency. This agency is a local governmental organization which has main responsibility in empowering farmer community.

Refers to the sustainable development theory, agriculture development in Malang Regency should integrates social, economic, and environmental aspects in its development strategy in order to ensure the sustainability of agriculture sector itself. This is also explained in Local Regulation of Malang Regency



Number 7 of 2010 on Control of Pollution and Environmental Damage especially in Article 1 paragraph 14 which defines sustainable development as conscious efforts that integrates environmental, social and economic aspects into a development strategy to ensure the integrity of environment along with the safety, welfare ability and quality of life of the present and future generations.

Furthermore, take a consideration that sustainable development requires integration of the three aspects, in practice of development which is conducted by local government this requirement automatically gives consequence that there must be a good relationship and cooperation among all components of governmental structure, especially the components that has a main task related to certain matter of development, for example is in the matter of agriculture development. This relationship and cooperation is the most important thing in order to be able to run development and governmental affairs properly.

Putting in mind that agriculture sector development is the responsibility of 4 departments as a unity that cannot be separated in Malang Regency, namely Department of Agriculture and Plantation, Department of Animal Husbandry and Health, Department of Forestry, and Department of Marine and Fishery, in addition that sustainable agriculture development requires the integration and consideration of economic, social, and environmental aspect equally, so there are at least one more department and 2 agencies which have responsibility in promoting sustainable agriculture in this regency, namely Department of Irrigation, Environment Agency, and Food Security and Counseling Implementer Agency.

This argument is in line with the explanation of Mr. Bambang Widjanarko, a specialized staff of Regional Development Agency of Malang Regency:



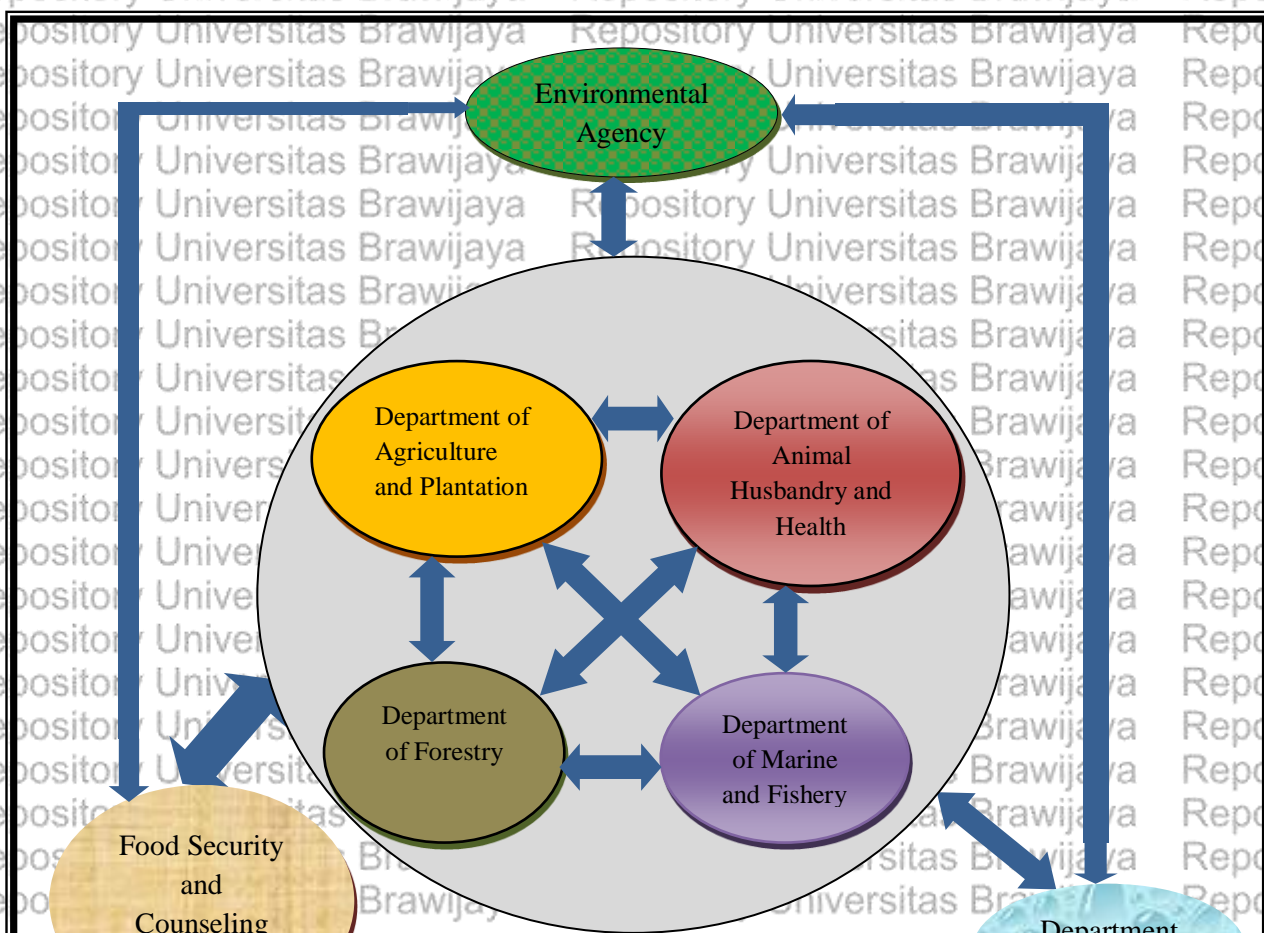
"If we discuss about promoting sustainable agriculture development in this District, there are so many departments and agencies that should be involved, almost all. But, the main departments and agencies that have tasks related to this matter are Department of Agriculture and Plantation, Department of Marine and Fishery, Department of Animal Husbandry and Animal Health, and Department of Forestry, Department of Irrigation, Environment Agency, and Food Security and Counseling Implementer Agency. Those departments and agencies should cooperate well" (Interview on June 18th, 2012 at 11am).

From the result of interview above, it can be conclude that those seven departments and agencies are the main departments and agencies which have responsible in promoting sustainable agriculture development in Malang Regency.

Picture 18

Related Departments and Agencies in

Promoting Sustainable Agriculture Development





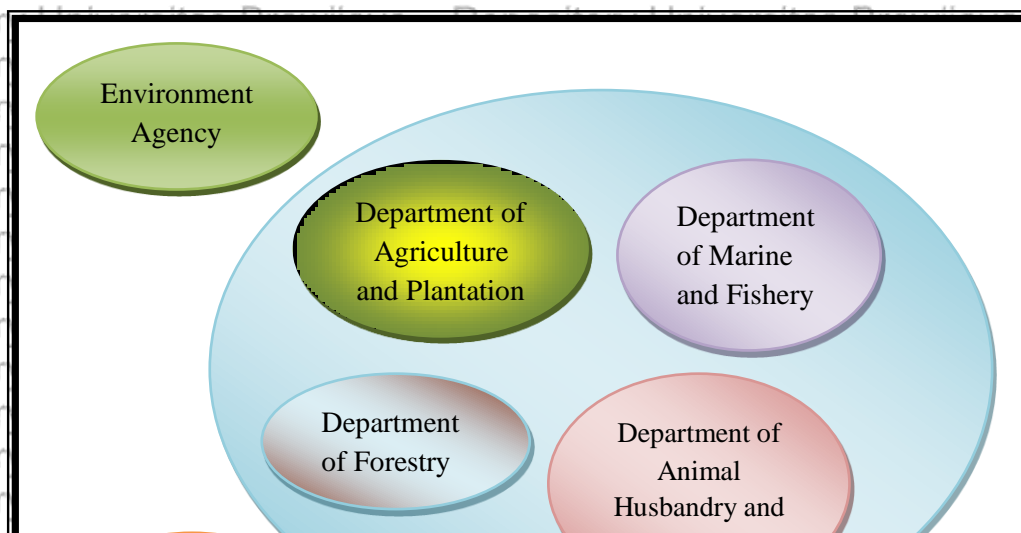
Source: analysis of the writer

From the picture 18 above, it can be seen that for promoting sustainable agriculture development in Malang Regency, there are at least 7 local governmental working units which consist of 5 departments and 2 agencies that should integrate and cooperate each other. Those departments and agencies should be integrated and cooperate well in order to promote sustainable agriculture development in Malang Regency.

However, those departments and agencies do not cooperate well. Those related local governmental working unit concentrate more on their own job only. They formulate their own development program without coordination among all related departments and agencies. This condition results many programs that are overlapping and sometimes the program that should be conducted by 2 departments while in fact only conducted by one department.

Picture 19

Un-integrated and Un-corporate Related Departments and Agencies





As the example is the Program of Procurement of Forestry Extension Infrastructure (explained more detail in this chapter point 5.3, number 5.3.2, section I), actually the implementation of this program should also involves Department of Agriculture and Plantation because forestry is a kind of sustainable agriculture practice that combine agriculture and forestry vegetation in the same land. This condition has become inhibitor in promoting sustainable agriculture development in this regency.

From the picture above can be seen that there is no cooperation and integration among all related departments and agencies in promoting sustainable agriculture development program. Considering the requirement of sustainable development theory which is also contained in the Local Regulation of Malang Regency Number 7 of 2010 on Control of Pollution and Environmental Damage that the integration of the three aspects is the emphasizing point of this theory, the condition of all related departments and agencies is the serious problem and become one of the main inhibiting factor in promoting sustainable agriculture development in this regency. With the reference to this condition, it can almost be ensured that the sustainable agriculture in Malang Regency cannot be



implemented maximally so that the goal of sustainable agriculture development itself cannot be fully achieved.

5.3. The Efforts of Local Government in Achieving Sustainable Agriculture Development and Community Empowerment

In order to promote sustainable development in Malang Regency as stated in the document of Middle-Term Development Planning of this Regency, Local Government entrust the implementation of sustainable development in the field of agriculture toward several related departments and agencies which have responsibilities in this matters.

As the parties who are entrusted by the Local Government of Malang Regency to promote sustainable agriculture development in this Regency, those related departments and agencies made several efforts which contained in their development programs and activities.

5.3.1. Department of Agriculture and Plantation

In order to develop agriculture sector for the direction of sustainable agriculture in Malang Regency appropriate with the vision of Department of Agriculture and Plantation, this department implement several development programs for the farmers and also the employee of this department.

Those programs comes from national program and also the result of regional planning development meeting that is held annually in village, sub-district and regency level, also involve the society and the government. As stated by Mrs. Dyah R, staff of the Division of Agricultural Business, Department of Agriculture and Plantation:



Those programs comes from national program that initiated by national government and the result of regional development planning. In fact, almost most of those programs come from national program that have been initiated years ago and implemented up to present time (Interview on July 29th, 2012 at 11 am).

Along with the statement above, Mr. Slamet Budi Samsul, the head of Rice and Horticulture Sub-Division, Division of Food Production stated:

Policy for developing sustainable agriculture is a top down policy comes from national government. So, most of the programs comes from national government from previous years up to present. We just continue to implement it (Interview on July 29th, 2012 at 13 pm).

From the interview above, it also can be seen that almost most of those program comes from and initiated by national government which must be implemented by local government. The programs of agriculture development that are implemented by Department of Agriculture and Plantation can be seen in the description below.

a. Program of Integrated Crop Management Field School

Integrated Crop Management Field School is a field school for farmers in applying technology through the efficient use of production inputs in specific location to generate higher productivity which has been implemented since 2009 in Malang Regency. This program was held in one period of planting time which consists of 10 meeting between farmer groups and agricultural counselor as an expert in the field of agriculture, and evaluated after harvest period. However, it



cannot be ensured that chemical inputs are not used in the implementation of this program. It is because the chemical fertilizer is still used in a big amount in Malang Regency. Therefore, it can be said that this program does not lead to sustainable agriculture development; however this is an empowerment program because the farmers can increase their knowledge and skill through joining this program.

b. Program of Cooperative Farming

Cooperative Farming is a farmer empowerment model through farmer group by strengthening institution of farmer group, giving counseling and developing human resource of the farmers. Through this program, the farmers are expected to be able to access capital, market, and agricultural production infrastructure easily with low price. In addition, the farmers are expected to get more knowledge related to agricultural business, and also established cooperation among farmers, government and private sectors. In Malang Regency, Cooperative Farming Program is implemented by giving training to the farmers who is joined in farmer group. While for the provision of agricultural production infrastructure, the government provide grant for selected farmer groups.

This program does not only concern on increasing economic aspect but also social and natural aspect for the long term period. This program has suitable with the principle of sustainable agriculture development because this program has concern on economic, social



and environmental aspect and delivered it through a farmer empowerment program.

c. Program of Development of Composite Maize

Development of Composite Maize is one of the agriculture development programs that are formulated by Directorate General of Crops, Ministry of Agriculture of Indonesia in order to increase production, productivity, and quality of crops in order to achieve sustainable sufficiency.

In Malang Regency, this program is implemented in order to increase production of maize through the application of composite maize (a kind of excellent variety of maize which can produce five until six ton of maize per hectare) cultivation technique in a good and right way. In its implementation, Department of Agriculture and Plantation in collaboration with Food Security and Counseling Implementer Agency give maize seeds and training, also counseling to the farmers so that the farmers can plant composite maize in a good and right way, in addition can produce maximum composite maize with good quality.

However in this cultivation process, the usage of chemical fertilizer still dominates this activity. So it can be said that this program only concern on economic aspect and ignore environmental aspect. This practice is not suitable to sustainable agriculture development principle and tends to lead to green revolution. Fortunately, through this program, the farmers obtain new knowledge by joining the training. This knowledge is very useful in increasing their quality of life. This activity is in line with the principle of farmer empowerment.



d. Program of Development of Cassava

Cassava is one of Malang Regency's agriculture potential which needs to be developed. Along with the program from Directorate General of Crops, Ministry of Agriculture of Indonesia in order to increase production, productivity, and quality of crops in order to achieve sustainable sufficiency, the Government of Malang Regency implement program of development of cassava in some areas of this regency.

In its practice, Department of Agriculture and Plantation gives cassava seed as grant to selected farmer groups. This department also gives training concerning appropriate cassava cultivation technique to the selected farmer group which receive grant from this department. However, it cannot be ensured that this technique is environmentally friendly with the consideration that Malang Regency's fertilizer usage is still dominated by chemical fertilizer. It is not appropriate with the requirement of sustainable agriculture development theory which also has concern on natural preservation. However, this program has leads to farmer empowerment because the local government gives training to the farmers, so there is human development activity in this program. The farmers can get new and positive knowledge that can influence the increase of their quality of life

e. Program of Integrated Pest Management (IPM)

Program of Integrated Pest Management is a national program in order to provide a basis for sustainable and environmentally agriculture (Decree of the Minister of Agriculture Number:



390/Kpts/TP.600/5/1994 on the Implementation of the National Program for Integrated Pest Management). This program aims to control the growth of destructive pests of agricultural crops by considering ecological, stability and sustainability aspects of agricultural production in order to avoid economic losses and environmental damage. Thus, in practice, it replaces the use of chemical pesticides by using biological materials and methods such as natural enemies (predators) and biological pesticides derived from plants.

In Malang Regency, the implementation of this program is formally held once a year in some agricultural areas most affected by agricultural pests. As stated by Mr. Slamet B.S, the head of Rice and Horticulture Sub-Division, Division of Food Production:

This program is held formally once a year in agricultural areas most affected by agricultural pest, after that they can continue by themselves independently. For the infrastructure that supports the implementation of this program, we usually use everything that is available in this department for example poison, sulfur, or others, even ask those farmers to hunt those pests. We never use predators because it is difficult and who want to get so many predators in agricultural area? Who will take the responsibility if these predators also dangers the human and other animal? (Interview on July 27th, 2012 at 1 pm).

From the interview above, it can be known that Department of Agriculture and Plantation has responsibility in implementing this



program and also provide infrastructures. After the implementation of this program formally, farmers can continue this program by themselves without any assistance from the government. It is also known that Department of Agriculture and Plantation has never used any predator to eradicate pests. This department uses poison, sulfur trap, or by driving farmers in a gang to hunt down and kill these pests.

The implementation of this program does not suitable with the sustainable agriculture principle which requires reduce of chemical input usage and consider the future generation's life. By using chemical input and hunting the pest, it will destroy the ecosystem, causes natural degradation which can danger the next generation's life, and also the impact of this implementation is only for really short time, not sustainable.

The implementation of this program also does not lead to farmer empowerment because the farmers are not taught about the proper implementation of integrated pest management. The local government through the responsible department only gathers the farmers to hunt the pest. There is no transfer of knowledge activity in the implementation of this program.

f. Program of Increasing Agriculture/Plantation Production

This program aims to increase agricultural production by providing infrastructure for increasing agricultural production, especially 35 units of tractors as grant for farmer groups that has been selected by Department of Agriculture and Plantation of Malang Regency. This regency also provides subsidized fertilizer and allocates it to several



agricultural areas. However, the most fertilizer that is allocated is chemical fertilizer; it is around 94%, while organic fertilizer is only about 6% of the total fertilizer usage in this regency.

This implementation is not suitable with the principle of sustainable agriculture development and tends to suitable to green revolution which only concern in increasing economic aspect.

Sustainable agriculture requires the reducing of chemical input. This program also does not lead to farmer empowerment; even this has high potential in increasing the level of dependency of the farmer toward local government. It is because there is no transfer of knowledge activities in the implementation of this program, but there is only giving grant.

g. Program of Increasing Agricultural and Horticulture Production Marketing

This program aims to increase agricultural production marketing through promotion of excellent agricultural product. In this program, Department of Agriculture and Plantation of Malang Regency organized exhibitions of agricultural products at the regency, provincial, and national level.

In its practice, these exhibitions are not followed by the farmers who have excellent agriculture products, as stated by Mr. Adjunudin, the head of the Division of Processing and Marketing of Harvest:

We join in the exhibition at local until national level in order to show and expose our agriculture products and also to invite consumer or company that is interesting with our products. We



buy the agricultural products directly from the farmers and agribusiness center, and then bring it to the exhibition, so our employee will participate in this exhibition, not the farmers (Interview on July 27th, 2012 at 1 pm).

From the interview above, it can be known that the exhibition is followed by employees of Department of Agriculture and Plantation of Malang Regency. This department buys some kinds of excellent agricultural products both directly from the farmers and from agribusiness center to be exhibited at the exhibition.

The implementation of this program does not suitable to the principle of sustainable agriculture development as a long term development objective which integrates economic, social, and natural aspects. This is also seems to tend to green revolution practice which only focuses on increasing economic aspect. In addition, the implementation of this program also does not lead to farmer empowerment because there is no increasing knowledge activity for the farmers, even the farmers do not have a chance to involve in this exhibition.

h. Program of Increasing Food Security

Malang Regency has a big potential in food availability because this regency has so many agricultural products with fertile land. Thus, food security still become one of the main the focus in this regency considering that the increase of population growth climate change, and pests and disease infection that can reduce the amount of agricultural products. Related to increasing food security in Malang Regency,

Department of Agriculture and Plantation implement some activities as follows:

1) Post-Harvest Handling and Agricultural Products Processing

This activity aims to develop the farmers so that they can process and manage their harvest optimally. Related to this activity, Department of Agriculture and Plantation provide grants in the form of 6 units of paddy mower, 3 units of power thresher and 4 units of pedal threshers to selected farmer groups. This department also gives training to 50 participants who are the representative of farmer groups.

2) Development of Market Information System

This activity aims to increase the service for farmers and seller in the provision of market price data. In its practice, there are some expert gives training to the employee of Department of Agriculture and Plantation. The government of Malang Regency also gives some laptops as the supported infrastructure.

3) Research and Development of Post-Harvest Technology

This program aims to increase farmer's income through giving training on plantation production processing to 25 farmers. This department also gives fast food coffee processing equipment and brown sugar maker to the selected farmer groups.

Viewed from the implementation of this program, this more concern on increasing economic aspect without a consideration toward natural and social aspect which is along with the principle of green revolution. However, this is also an empowerment program because



the local government increases farmer's knowledge and skill by giving training which will be able to influence their economic aspect to be better.

i. Program of Construction of Farming Irrigation Network

This is a program for constructing irrigation network in agricultural area in order to maximize water management in agricultural area. In this construction process, Department of Agriculture and Plantation in collaboration with certain developer build the irrigation network for the farmer groups in certain agricultural area that have been selected by this department.

Moreover, this program also can preserve the nature because by providing sufficient water for the land, it will be able to maintain soil quality and fertility. So this program concerns not only in economic aspect but also in natural aspect. This is in line with the principle of sustainable agriculture development which not only focuses on increasing economy as required by green revolution movement. However, in this program, there is no empowerment activity because the farmers do not do anything. They just receive the new irrigation construction in their agricultural land.

j. Program of Agricultural Road Development

Program of Agricultural Road Development is an agricultural road construction program in production center of crops, horticulture, plantation, and animal husbandry. This is a national program which is handled by Directorate General of Agricultural Infrastructure of Ministry of Agriculture of Indonesia and implemented by every cities and



regencies throughout Indonesia including Malang Regency. This program is expected to be able to increase the farmer's welfare because they can reduce cost, time and energy in moving their harvest and agriculture infrastructure in and from agricultural area to the place for storing, processing and marketing of agricultural products.

This program, including construction of new road or maintenance of road in agricultural area, increases the capacity of the road, and the improvement of roads quality that have been damaged.

In practice, this agricultural development program is divided into two sub-programs, namely:

1) Farming Road Development

Farming Road Development is a program for developing or repairing the road in agricultural area and completes it with drains on both sides of the roads. This program aims to ease traffic in the agricultural area for the farmers during the harvest to bring their harvest and production infrastructure.

In its implementation, farmer groups which pass the selection process receive grant from Department of Agriculture and Plantation in the form of farming road construction. But, the farmers must be willing to waive some of their land without compensation for the construction of this road. After this road had been constructed, farmers must be willing to take care of the road independently.

2) Production Road Development



This program is a program for constructing of maintaining the road from agricultural area to the place for storing, processing and marketing of agricultural products. This program aims to ease the traffic from agricultural area to the place for storing, processing and marketing of agricultural products for the farmers in bringing the harvest. Department of Agriculture and Plantation gives grant to selected farmer group in the form of production road construction.

Viewed from the implementation of this program, this program really focuses on economic aspect and do not concern on social and environmental aspects. This program also does not lead to farmer empowerment because there is no human development activity in this program. The local government only develops the road and the farmers use and maintain the road. This condition have a big potential in increasing the dependency of the farmers to the local government because they only make a proposal and the local government gives them grant in the form or road development.

k. Program of Home Composting Construction

This program aims to provide a place for processing compost fertilizer for farmers who are involved in farmer groups. This program is a grant program and given to farmer groups which have received grant in the form of compost making machine. Department of Agriculture and Plantation has built 22 units of home composting which are used by 22 farmer groups in 19 sub-districts of Malang Regency.

In order to get the grants from the government, the farmers should make a proposal to Department of Agriculture and Plantation,



and then this department will conduct survey and make assessment in order to decide the farmers or farmers group that can receive the grants. As stated by Mrs. Dyah R. staff of the Division of Agricultural Business, Department of Agriculture and Plantation:

Those farmers or farmer groups should make a proposal and send directly to this department. This department will conduct survey in around three months to decide who or what farmer groups that should receive the grants. If the farmers or farmer groups propose the grant that are not included in this department's program for this year, so this farmer or farmer group should wait until this department has program that suitable with their proposal (Interview on July 29th, 2012 at 11.15 am).

From the information above, it can be understood that the farmers and farmer groups will not receive the grant if Department of Agriculture and Plantation doesn't have the program that is suitable with their proposal, and they should wait until this department has the program that is suitable with their proposal.

Basically this program aims to increase economic income by preserving the nature. Because the farmer can increase income by making and selling compost which is environmentally friendly and do not cause soil fertility degradation. The farmer can also use the compost for their own agriculture land so they do not need to buy fertilizer. This program and its implementation are really suitable with the principle of sustainable agriculture development. However, the implementation of this program in this year does not lead to farmer empowerment because

the local government only gives a grant without giving training; the training has given in the previous years.

Reviewing those agriculture development programs that are conducted by Department of Agriculture and Plantation above, it can be concluded that those programs can broadly grouped into 4 categories of programs, namely sustainable, non-sustainable, empowerment and un-empowerment agriculture development programs. In order to get easier understanding, this description can be seen in the table 8 below.

Table 8

Classification of Agriculture Development Programs conducted by Department of Agriculture and Plantation

No	Program	S	NS	E	UE
1	Integrated Crop Management Field School		√	√	
2	Cooperative Farming	√		√	
3	Development of Composite Maize		√	√	
4	Development of Cassava		√	√	
5	Integrated Pest Management (IPM)		√		√
6	Increasing Agriculture/Plantation Production		√		√
7	Increasing Agricultural and Horticulture Production Marketing		√		√
8	Increasing Food Security		√	√	
9	Construction of Farming Irrigation Network	√			√



10	Agricultural Road Development		√		√
11	Home Composting Construction	√			√
TOTAL		3	8	5	6

Source: Analysis of the Writer

Note: S=Sustainable, NS=Non-sustainable, E=Empowerment, UE=Un-

From the table above can be known that Department of Agriculture and Plantation of Malang Regency has conducted 11 agriculture development programs during 2011. From those 11 programs, there are 3 programs that lead to sustainable agriculture while the rest of it is non-sustainable agriculture development program, and from those 11 programs also can be known that there are 5 programs that lead to farmer empowerment, while the 6 others is un-empowerment program. So, every program include into two categories. In order to get easier understanding, the table below gives clear description.

Table 9
Categorization of Agriculture Development Programs conducted
by Department of Agriculture and Plantation

No	Program	S-E	S-UE	NS-E	NS-UE
1	Integrated Crop Management Field School			√	
2	Cooperative Farming	√			
3	Development of Composite Maize			√	
4	Development of Cassava			√	
5	Integrated Pest Management (IPM)				√
6	Increasing Agriculture/Plantation Production				√
7	Increasing Agricultural and				√



	Horticulture Production Marketing				
8	Increasing Food Security			√	
9	Construction of Farming Irrigation Network		√		
10	Agricultural Road Development				√
11	Home Composting Construction		√		
TOTAL		1	2	4	4

Source: Analysis of the Writer

Note: S-E=Sustainable and Empowerment, S-UE=Sustainable and Un-Empowerment, NS-E=Non-sustainable and Empowerment, NS-UE=Non-sustainable and Un-empowerment

From the table above can be seen that Department of Agriculture and Plantation of Malang Regency has agriculture development programs that can be classified into 4 groups namely sustainable-empowerment programs, sustainable-un-empowerment program, non-sustainable-empowerment program, and non-sustainable-un-empowerment program.

From the table above is also can be known that this department has conducted only 1 sustainable agriculture development program that lead to farmer empowerment and 2 non-sustainable agriculture development program that lead to farmer empowerment. While the 8 other programs are not sustainable agriculture development programs but 4 of those program do not lead to farmer empowerment. The table above shows that this department does not make sustainable agriculture as a main concern. However, this department has given pay attention toward farmer empowerment although it is still a little.

5.3.2. Department of Forestry



Department of Forestry as a part of departments and agencies which have main responsibility in developing agriculture sector has conducted many programs during 2011 in order to develop forestry in Malang Regency as a part of agriculture sector. However, not all of those programs lead to sustainable agriculture and farmer empowerment although this regency has requires implementing it as stated in some legal framework of this regency. This can be seen in the explanation below.

a. Program of Development of Examination and Distribution of Forest

Products

This program aims to protect forest product especially community forest product so that the society who has forest area get protection from the government to possess, manage, carry away, and trade their own forest products. This program also aims to prevent forest thefts and illegal logging. Related to this program, Department of Forestry gives service to the society in term of giving, managing, and issuing Letter of People Log Wood and also distributes the certificate of the origin of the woods to all village chiefs in Malang Regency.

Basically this program only implemented by providing the letter that certifies the trees which have been cut and will be sold or moved to other regency are originally belong to the farmers itself. This is like provide a facility for smoothing the tree sale. There is no concern on natural preservation or social aspect in this matter, but maybe it will give a good impact on economic aspect of the farmers. In addition, it can be said that this is not farmer empowerment program because this



is program that only can conducted by the local government employee without involving the society.

b. Program of Assistance for Community Forest Business Group

This program aims to give assistance for farmer group of community forest in order to get sustainable community forest management certification. This kind of certification is a market-based forest policy instrument that uses a stick and carrot approach, which not only promote sustainable forest management through wood boycott campaigns (stick) from forests that are not managed sustainably, but also expected to offer incentives (economic carrots), a better market access and (perhaps) a premium price to forest managers who are able to manage their forests sustainably (Cashore et al., 2004 in Maryudi, 2005:1). In this year, Department of Forestry focuses on one management unit which consists of 5 villages in one sub-district in Malang Regency.

This program has led to sustainable agriculture development and farmer empowerment because this program empowers the farmers by giving assistance in order to be able to manage their forest sustainably. So, sustainable forest management has been implemented through this program.

c. Program of Making Seedlings / Forestry Seeds

The Program of Making Seedlings / Forestry Seeds aims to maintain the availability of Forestry Seeds. This program is implemented by running two activities, namely:

1) Creating Village Nurseries



During the year of 2011, the government of Malang Regency through department of Forestry creates 2 units of Village Nurseries in 2 villages, namely Sukodono Village and Duwetkrajan Village. From those 2 units of Village Nurseries, 75.000 stems of forestry seeds are obtained. This activity is funded by using Regional Revenue and Expenditure Budget (RREB) of Malang Regency.

2) Creating Citizenry Nurseries

Basically this activity is same as Village Nursery, but the budget that is used in this activity come from provincial government and managed by Central Management Office of Brantas River Watercourse, while Department of Forestry as official technical implementer. This activity is held in 50 villages of 33 sub-districts in Malang Regency and obtains various kinds of fruits and forestry seeds which are distributed to the villages around those nurseries and also to the society who has dry land.

Refers to the implementation of this program, it can be said that this program try to preserve the nature and conserve the dry land so that the balance and sustainability of the nature can be maintained. In addition, someday the farmers can get economic income from these forestry seedlings if these seeds have grown up and ready to be cut and sold. So this program concern on preserving the nature while concern also on economic aspect of the farmers. This has in line with sustainable agriculture development. Unfortunately, this program does not involve the farmers so the farmers do not get knowledge from the implementation of this program.



d. Program of Development of Community Forest and Vegetative Enrichment

This program is held by building 375 hectares of community forest (forest that belong to and managed by a community such as village, society or ethnic society) in 15 villages of 14 sub-districts in Malang Regency area. Basically, this program aims to preserve the nature along with increasing farmer's economic income. This is in line with the requirement of sustainable agriculture development for increasing income while preserve the nature. However, this program can be said as the program that leads to farmer empowerment because this program is conducted only by local government without involving the farmers.

e. Program of Greening the Environment

This program aims to reduce pollution and prevent flood and erosion in raining season, also stabilize the temperature with the reason that nowadays the temperature increases as the impact of rapid growth of industry and . This program is held by planting 72.842 tress at the area of public facilities, social facilities and stretch of vacant land.

Considering that sustainable agriculture development as the implementation of sustainable development in agriculture sector emerge as the critics toward green revolution, a development paradigm that concern in economic aspect only in agriculture sector, and also to face natural degradation that caused by the implementation of green revolution, this program is implemented in order to recovery the natural



degradation by planting the trees so that the sustainability of the nature can be maintained. While because this program is conducted by local government apparatus only, especially the employee of Department of Forestry and do not involving the society, so it can be said that this program does not lead to farmer empowerment.

f. Program of Development of Soil and Water Conservation

This program aims to maximize water infiltration in the raining season so it can prevent dryness, flood and erosion and also keep the rain water in order to stabilize the water supply in the dry season especially for wet rice field area so the farmer can get sufficient water for their rice field. This program is held by building sedimentation control building and water infiltration well (a building resembles a dug well with certain depth to collect rain water that falls on the roof of the house or the watertight area and infiltrate in into the ground) . In its implementation, the government builds 6 Retaining Dam and 36 units of infiltration well.

Considering that sustainable agriculture development give a big concern in preserving the nature, this program can be said that has in line with this theory. This program try to prevent the dryness which cans danger human life, especially the farmer because the dryness makes them cannot cultivate the agriculture land; furthermore they cannot get enough income. This is one of the examples of natural preservation activities. However this program is not farmer empowerment program because it is conducted by Department of Forestry itself without involving the farmers.



g. Program of The Arrangement of Forest and Land Rehabilitation Management Planning

This program aims to formulate a proper forest and land rehabilitation management planning by arranging document of Forest and Land Rehabilitation Management Planning (FLR-MP) and Annual Management Planning of Forest and Land Rehabilitation (AMP-FLR) of Malang Regency in order to keep the rehabilitation program in track and appropriate with condition of Malang Regency.

This program is one of the program that conducted by Department of Forestry in developing agriculture sector in Malang Regency especially in the field of forestry by creating forest development management planning. However, this program does not reflect sustainable agriculture development and farmer empowerment program because this is a forest management planning activity that conducted only by and among the employee of Department of Forestry without involving the farmer. In addition, there is no practice of sustainable agriculture in this program activity.

h. Program of Water Catchment Area Conservation

Similar to the program of development of soil and water conservation, this program aims to maintain water supply with adequate amount by planting trees around springs. In the year of 2011, this program is held in 4 villages in Malang Regency by the government of Malang Regency especially Department of Forestry.

This program is one of the programs that have a big concern on natural preservation. In line with the requirements of sustainable



development to consider the future generation's ability in meeting their need from the nature, this program tries to maintain water supply with adequate amount by planting the trees surrounding the springs, it means that this program tries to keep the balance and sustainability of the nature so the next generation can fulfill their needed that are provide by the nature. This program is for implemented by local government itself, so there is no society's involvement in this case.

i. Program of Conservation of Biological Natural Resources

This program aims to rehabilitate forest area that damage because of road construction (south traffic route) in south area of Malang Regency by planting 24.420 stems of woody plants. Basically this program more concern on natural preservation because this program rehabilitate forest area; however in the long term it will be able to increase the farmer income when those trees are mature enough to be cut and sold and replaced by the new trees.

In line with the principle of sustainable agriculture development which is not focuses on economic aspect only, but also focuses on environmental and social aspects, this program does not concern on economic aspect only, but more on natural preservation. However, this program is conducted by Department of Forestry in collaboration with other related department without involving the farmers, so there is no farmer empowerment activity in this program.

j. Program of Development of Various Forestry Business

This program aims to develop forestry business by giving capital assistance in the form of non-timber forest product processing



equipment to some small-middle entrepreneurs in Amadanom Village, Dampit sub-district, Malang Regency.

If it is seen from its implementation, this program concern on increasing economic aspect only without concerning social and environmental aspects. While focusing on economic aspect only is the characteristic of green revolution movement that has been replaced by sustainable agriculture development practice because it has been proven cause social and environmental degradation.

Furthermore, this program also has big potential in increasing the dependency of the farmer entrepreneur toward local government, because in the implementation of this program the local government gives capital assistance as a grant without giving training and other transfer of knowledge activities.

k. Program of Increased Community Participation in Forest and Land Rehabilitation

This program aims to increase participation of society in saving the environment and world by implement several activities such as:

1) Indonesian Tree Planting Day

This activity is an annual event which is held on every November 28th at national level and followed by all provincial and local level at the same date, as a concrete effort on preventing global warming. In 2011, department of Forestry has responsibility to implement this event in 3 villages of 2 sub-districts, namely Mojosari and Ngadilangkung Village in kepanjen Sub-district and Ngasem Village in Ngajum sub-district.



2) Women Movement of Tree Planting and Raising.

This movement is held every year at the same day as Indonesian Tree Planting Day as the effort of women in participating on Indonesian Tree Planting Day. In 2011, this movement was held at Kepanjen west ring road of Malang Regency.

3) Greening and Nature Conservation Competition

This competition is a program from ministry of Forestry which is its reward called "Wana Lestari" means "sustainable forest". This competition is held annually in every Regency and municipality as an effort to give reward and appreciation to the community, forestry officials, government and business that have "achievement" in supporting development of forestry, particularly the rehabilitation and conservation of natural resources independently. This event is expected to be able to motivate the society to participate in national forestry development.

Basically this program tries to preserve the nature by involving society including the farmers. In this implementation, the local government gives socialization and invites the society to preserve the nature by planting the trees. Considering that sustainable agriculture development as the implementation of sustainable development theory in the agriculture sector requires considering the nature, this program has suitable with this theory. Furthermore, this program has also lead to farmer empowerment because in its implementation, local government give socialization that make the society get knew



knowledge and have awareness and willing to joint in the natural preservation activity.

I. Program of Procurement of Forestry Extension Infrastructure

This program aims to be able to implement forestry extension properly by providing demonstration plot of forestry extension.

Department of Forestry of Malang Regency creates an agroforestry model in Sukodono Village in order to socialize the agroforestry model in Malang Regency.

Basically this program aims to create and socialize an agroforestry model to the society especially farmers in Malang Regency. In many countries, agroforestry is including in the sustainable agriculture practice that can give economic benefit and preserve the nature. In the implementation of this program the local government also empowering the society by socializes agroforestry so they get knowledge about agroforestry. This program has suitable with sustainable agriculture principle and also lead to farmer empowerment

Reviewing those programs that have been conducted by Department of Forestry above it can be grouping into sustainable and non-sustainable program, also empowerment and un-empowerment program.

The table below gives a simple and clear description concerning this matter.

Table 10



Classification of Agriculture Development Programs conducted by Department of Forestry

No	Program	S	NS	E	UE
1	Development of Examination and Distribution of Forest Products		√		√
2	Assistance for Community Forest Business Group	√		√	
3	Making Seedlings / Forestry Seeds	√			√
4	Development of Community Forest and Vegetative Enrichment	√			√
5	Greening the Environment	√			√
6	Development of Soil and Water Conservation	√			√
7	The Arrangement of Forest and Land Rehabilitation Management Planning		√		√
8	Water Catchment Area Conservation	√			√
9	Conservation of Biological Natural Resources	√			√
10	Development of Various Forestry Business		√		√
11	Increased Community Participation in Forest and Land Rehabilitation	√		√	
12	Procurement of Forestry Extension Infrastructure	√		√	
TOTAL		9	3	3	9

Source: Analysis of the Writer

Note: S=Sustainable, NS=Non-sustainable, E=Empowerment, UE=Un-empowerment

From the table above can be seen that Department of Forestry has 12 agriculture development programs in field of forestry that consist of 9 sustainable agriculture development programs while the 3 of them are not. From those programs there are also 3 farmer empowerment programs and 9 un-empowerment programs. So, every program has 2 categories as described in the table below.

Table 11



Categorization of Agriculture Development Programs conducted by Department of Forestry

No	Program	S-E	S-UE	NS-E	NS-UE
1	Development of Examination and Distribution of Forest Products				√
2	Assistance for Community Forest Business Group	√			
3	Making Seedlings / Forestry Seeds		√		
4	Development of Community Forest and Vegetative Enrichment		√		
5	Greening the Environment		√		
6	Development of Soil and Water Conservation		√		
7	The Arrangement of Forest and Land Rehabilitation Management Planning				√
8	Water Catchment Area Conservation		√		
9	Conservation of Biological Natural Resources		√		
10	Development of Various Forestry Business				√
11	Increased Community Participation in Forest and Land Rehabilitation	√			
12	Procurement of Forestry Extension Infrastructure	√			
TOTAL		3	6	0	3

Source: Analysis of the Writer

Note: S-E=Sustainable and Empowerment, S-UE=Sustainable and Un-Empowerment, NS-E=Non-sustainable and Empowerment, NS-UE=Non-sustainable and Un-empowerment

From the table above can be seen that Department of Forestry has conducted 3 sustainable agriculture development programs that lead to farmer empowerment, 6 programs are sustainable agriculture development program which do not lead to farmer empowerment, and 3 agriculture development programs that do not lead to sustainable agriculture and



farmer empowerment. This Department seems has a big enough concern on sustainable agriculture development especially in the field of forestry development by conducting many natural preservation programs. However, farmer empowerment has not become a concern of this department.

5.3.3. Department of Animal Husbandry and Animal Health

Department of Animal Husbandry and Animal Health also conducted agriculture development program during 2011, and from those programs, some of them are sustainable agriculture development program and also lead to farmer empowerment.

a. Program of Breeding Development

This program aims to increase genetic quality of livestock and develop superior seeds in community, so the livestock population and productivity increases in order to support self-sufficiency in beef and buffalo meat, and also to increase community's welfare. In this program, government of Malang Regency through Department of Animal Husbandry and Animal Health, especially inseminator helped by non-governmental inseminator conduct artificial insemination for beef cattle, dairy cattle and goat. The inseminator from this department is only 20% of the total number of inseminator.

The result of artificial insemination activity is evaluated every month through pregnancy examination. According to data of this department, artificial insemination gives significant contribution toward development of animal husbandry sub-sector.



This department also gives grant in the form of artificial insemination equipment, operational container. This department also conducts genetic quality testing for dairy cattle from calf production performance, especially from its milk production. While, in order to prevent inbreeding, this department also mapping frozen semen distribution mapping by using certain code of bull.

Department of Animal Husbandry and Animal Health also develops rural breeding centers in order to help the preparation of long-term needs of calves in Malang Regency. The goal of this activity is to increase livestock genetic quality at livestock center village through livestock farming development, reproduction management food technology, infrastructure additions and recording groups.

Refer to its implementation, this program concerns on economic aspect as a priority. While as we know that the focus of sustainable agriculture development not only economic aspect, but also natural and social aspects. This program also has a big potential in increasing the dependency level of the breeder toward local government because local government gives grant to the breeder. This is not empowerment program, because empowerment program is a program to increase the dependency by increasing the ability through transfer of knowledge activities, so they can access their needs by themselves.

b. Program of Animal Feed and Technology Development

According to Department of Animal Husbandry and Animal Health, food is a determining factor of the biggest success in animal husbandry business which is around 70%. In accordance with that



reason, the main focus of this program is the sufficient food for livestock, so this department giving guidance to the society in choosing forage seed, land utilization, forage seed development, and socialization and training for socializing forage seed planting and implementation of forage preservation technology, how to make, give, keep and use concentrate feed, also the main ingredient that should be used.

This department also conducts coordination meeting activity which the material is including livestock feed material preparation techniques based local forage ingredient, compost heap utilization as main ingredient of livestock feed especially in dry season and forage preservation techniques. This activity is conducted twice a year in 2 sub-districts in Malang Regency. This department also expands forage land in 2 sub-district in this Regency with total expansion area is around 20 hectares, distribute and spread the seed.

This program is including giving feed processing machine from Department of Animal Husbandry of East Java Province and Directorate General of Animal Husbandry and Animal Health of Ministry of Agriculture, and build feed processing unit for selected breeder group in order to maximize the usage and utilization of feed potential in this regency and provide sufficient food for their livestock.

This program has been in line with the principle of sustainable agriculture development because this program tries to increase economic aspect by developing husbandry business while preserving the nature by expanding forage land area around 20 hectares. The



bulrush can help to prevent the land from dryness and help to keep the availability of adequate soil water. This program also tries to increase the knowledge of the farmers.

c. Program of Animal Husbandry Development

This program aims to increase livestock population, production and productivity. Department of Animal Husbandry and Animal Health gives counseling for breeder, especially the breeder who raises livestock from the government concerning livestock raising and dissemination system. This system is initiated by national government, but the technical guidance is formed by every local government.

In 2011, the government of Malang Regency gives livestock grant as a stimulant for selected breeder group. In addition, there is a social financial assistance from national government and also 16 heads of cows from East Java Provincial Government. However the amount of that livestock decreased continuously because of death that caused by sickness and given birth.

Every breeder has chance to raise one of grant livestock from the government for 2 until 3 years period of time and gives 1 of young animal of that grant livestock. After that period of time, that grant livestock will be raised by other breeder who has been decided by Department of Animal Husbandry and Animal Health.

Basically, it can be said that this program focuses on increasing economic aspect only by implement a livestock raising system from the government, so this is not suitable with sustainable agriculture development principle which also has focus on social and natural



aspects. In addition, this program also does not lead to farmer empowerment because there is no new knowledge that can improve the farmer quality transferred to the farmers, although there is a counseling activity but this kind of counseling only explain about the rule of livestock rising system. Furthermore, through this program, the local government also gives financial assistance as a grant to the farmer whereas this grant can increase the farmer's dependency toward local government

d. Program of Animal Husbandry Business Development

This program is more directed to develop milk cattle cooperative and business, from milk cattle farming until milk marketing. However in 2011, population of milk cattle was decreasing because two cooperatives are bankrupt. Department of Animal Husbandry and Animal Health also develops partnership pattern between chicken farming businessman and government in the term of farming and product marketing. This program is based on the decree of Ministry of Agriculture in 1996.

This department also develops various kind of animal husbandry business such as rabbit, pork, swallow, bustard, and sriti by giving animal husbandry business management license to guarantee the certainty of animal husbandry business and monitoring animal husbandry business environment in order to protect and preserve animal husbandry business environment which is estimated can cause pollution.



This department also helps the breeder and animal husbandry businessman to get credit by making partnership with certain bank for cow farming business (with the name credit program is a cow farming business credit) and breeder group (with the name credit program is Food and Energy Security Credit) in order to be able to develop their business. For cow farming business, the businessman can access the credit from the bank with the recommendation of Department of Animal Husbandry and Animal Health. This credit is designed for 6 years period with 5% interest per year. While the credit for breeder group can be accessed from the bank with the interest 14,255% per year and the government gives subsidy 8,15% for paying the interest, so the breeder group only need to pay interest 5% per year.

Broadly speaking, it can be said that this program focuses on economic aspect by creating marketing network between the breeder and local government, so the local government will help the breeder for marketing their product, and also focuses on natural preservation by monitoring and animal husbandry business environment to prevent pollution and giving license for animal husbandry business which can running their business while prevent the pollution caused by their business. This license will be able to make their production marketing run more smoothly. This program has been in line with sustainable agriculture principle which not only concern in economic aspect but also environmental aspect.

In addition, this program gives subsidy to the breeder for reducing the bank interest when the breeders borrow some money



from the bank to develop their business. In this case, the local government does not give a grant, but only help to reduce the interest amount, so the breeder still should pay some interest by themselves. Therefore this program does not increase the farmer's dependency toward the local government.

e. Program of Processing and Marketing of Animal Husbandry Products

This program aims to add the value of animal husbandry products and also provide marketing information of animal husbandry that is including livestock price, cattle seed price, livestock production price, animal husbandry production equipment, and also livestock market location.

Department of Animal Husbandry and Animal Health gives training on processing chicken become nugget, shredded chicken, and also processing cow milk become chips and milk taffy toward women group in 3 sub-districts. This program is expected to be able to increase knowledge and nutrient of the society through diversification of processed livestock product and also increase society's income especially for the women.

This department also monitors livestock price, cattle seed price, livestock production price, animal husbandry production equipment and spread those information through electronic media. The technical employee of this department gives report concerning market price



every month to this department and then this department publish it in website.

According to its explanation, this program only a program to provide animal husbandry marketing data in order to be easy to sell the animal husbandry product, so this program focuses on economic aspects. However this is an empowerment program because the local government gives training to the breeder to increase the value of animal husbandry product by processing animal husbandry product to be easier and more interesting to be consumed.

f. Program of Food Security

This program aims to maintain the food security especially from animal husbandry products. Department of Animal Husbandry and Animal Health conducts data collection and evaluation about the availability of food made from livestock product in order to make distribution system of livestock products. This distribution system is expected to be able to increase the availability of food made from livestock product and increase the ability and knowledge of the community in diversifying and developing food made from livestock product. This department also monitors the safety and quality of animal husbandry products by investigating the animal husbandry product marketing center.

Reviewing the explanation concerning this program, this program is only conducted by the employee of Department of Animal Husbandry and Animal Health in cooling and evaluating the data concerning the availability of animal husbandry product. It can be said



that this program does not lead to sustainable agriculture development and also farmer empowerment because there is no concern on the three aspects of sustainable development and also does not develop the farmer's quality.

g. Program of Development of Animal Husbandry Potential Data

This program aims to provide an accurate animal husbandry potential data in order to support the accuracy of farm development planning in short-term, middle-term, and long-term. This activity including data collection in the field, data processing, control and arrangement of animal husbandry potential data in Malang Regency. In addition, this program also included distribution of livestock ownership card.

In line with the program of food security above, this program is also only data collection program that conducted by local government through Department of Animal Husbandry and Animal Health. There is no farmer's involvement and transfer of knowledge activity to the farmers; in addition this program also does not integrate the three aspects of sustainable development, namely economic, social, and environmental aspects.

h. Program of Development and Empowerment of Animal Husbandry Human Resources

This program aims to increase human resource quality of breeders and entrepreneurs in the field of animal husbandry so they can be independent, tough response and professional by applying agribusiness and agro-industries management principles. In its



implementation, Department of Animal Husbandry and Animal Health build 30 units of farm waste biogas management center in 27 villages of 19 sub-districts.

The construction of farm waste biogas management center aims to produce alternative fuels of LPG of firewood. This program is expected to be able to reduce environmental pollution caused by manure piles, produce dung and improve breeder's income. This department also gives operational training on home composting of livestock waste and counseling on agribusiness management of goat farming.

This program can be categorized into the program that is in line with sustainable agriculture development and also lead to farmer's empowerment, because be reviewing the explanation concerning this program in the previous chapter can be known that local government through Department of Animal Husbandry and Animal Health gives operational training on home composting of livestock, build farm waste management center. The implementation of this program will give a positive impact on increasing economic and knowledge of the farmers, and also preserve the nature by the utilization of livestock waste.

i. Program of Institutional Arrangement of Livestock Farmers

This program is an empowerment program for cattle farmer groups to realize and independent and professional institutional of cattle farmer group with legal status. During 2011, Department of Animal Husbandry and Animal Health conducted two activities related



to this program which are funded by the directorate General of Livestock and Animal Health of Ministry of Agriculture, namely:

1) Scholars Develop Village (SDV)

The mechanism of this activity is by involving a scholar in a group as a manager in managing fund which is used in animal husbandry business in its group. This activity has been conducted since 2008, and in 2011 there are five scholars who manage five groups in five sub-districts.

2) Independent Institution Rooted in the Community (IIRC).

The mechanism of this activity is giving fund to social institution such as boarder school in order to be used in animal husbandry business. This activity has been conducted in Malang Regency since 2009 and during 2011 there are 2 institution which are received the fund to be managed, namely Sinar Abadi Educational Institution and Community Development, and also ERAMADANI Foundation for Potential Community Empowerment.

The success of this program implementation is relatively small because of low educational level, socio-cultural and economy of the society. Therefore the implementation of this program has not been succeed, has different result among the breeders, and also need much more time than other programs.

Basically this program is a farmer empowerment program, especially for the breeders. However, in its practice, the local government through Department of Animal Husbandry and Animal Health only give financial assistance as a grant to the breeders groups



to be used as capital in running livestock business, and this financial assistance is managed by scholar as the breeder group leader. There is of transfer of new knowledge to the breeder that can develop the breeder's quality. In addition, this program also focuses only on economic aspect only. It has been proven by the result of this program where the success of this program is relatively small because of low educational level and socio-cultural of the breeders

j. Program of Animal Disease Prevention and Eradication

This program aims to prevent and eradicate Avian Influenza and Brucellosis Disease. For the case of Avian Influenza Disease, Department of Animal Husbandry and Animal Health gives vaccination for the sick livestock in small scale chicken farm in 3 sub-districts and disinfection for the sick livestock in small scale chicken farm in 5 sub-districts in Malang Regency. Because of the limited budget, this department cannot gives this treatment thoroughly in this regency, so some breeder should visit veterinarian to get that treatment and pay by themselves. In addition, this department also conducts surveillance directly in the field and makes report.

While for Brucellosis, this department cannot eradicate this disease and only kill the cows that positively have Brucellosis disease based on certain medical testing. This department also only gives informal socialization concerning this disease when the employee of this department gives vaccination and disinfection for avian influenza disease.



According to the explanation of this program, it can be seen that this program actually want to prevent the breeder's economic lost that caused by disease attack. Therefor the local government gives free vaccination. So it can be said that this program focuses on economic aspect only and also has a big potential in increasing the dependency level of the breeder toward the local government.

k. Program of Animal Disease Surveillance and Veterinary Medic Services

This program aims to monitor the spreading of the disease and give veterinary medic services to breeders. This program is implemented because in 2011 there are so many diseases infected livestock in Malang Regency. Those diseases are parasite, mastitis, scabies, pullorum, new cattle disease, and chronic respiratory disease.

With the consideration that those diseases are dangerous and cause economic loss, Department of Animal Husbandry and Animal Health provide veterinary medic services. This service is given by technical employee of this department, Dairy Milk Cooperative, and private veterinarian. During 2011 this service included giving free mass treatment for 5.113 heads of cattle in 24 sub-districts. Department of Animal Husbandry and Animal Health also conducted inspection and control of reproductive disorders to 650 heads of beef cattle in 6 sub-districts and then address them by giving hormone therapy.

Actually, this program is similar to the program of animal disease prevention and eradication. However, this program is more specific for certain king of disease. So it can be said that this program

is also not sustainable agriculture development program that lead to farmer empowerment.

I. Program of Veterinary Public Health and Veterinary Drugs

This program aims to guarantee that livestock product in Malang Regency is healthy, safe, intact, and clean by monitoring the process of checkup, testing, standardization, certification and registration of livestock product. Reviewing to the explanation of this program, it can be seen that this program focuses on increasing economy of the breeder by ensuring that their product is clean and safety to be consumed, so that their product will be easier to be sold. In addition, this program is only conducted by the employee of Department of Animal Husbandry and Animal Health without involving the breeders.

From the explanation according those programs that has conducted by Department of Animal and Animal Health can be grouped into sustainable, non-sustainable, empowerment, and un-empowerment program. The table below tries provides this grouping in the simpler in order to get easier understanding.

Table 12

Classification of Agriculture Development Programs conducted by Department of Animal Husbandry and Animal Health

No	Program	S	NS	E	UE
1	Breeding Development		√		√
2	Animal Feed and Technology Development	√		√	
3	Animal Husbandry Development		√		√
4	Animal Husbandry Business Development	√		√	

5	Processing and Marketing of Animal Husbandry Products		√	√	
6	Food Security		√		√
7	Development of Animal Husbandry Potential Data		√		√
8	Development and Empowerment of Animal Husbandry Human Resources	√		√	
9	Institutional Arrangement of Livestock Farmers		√		√
10	Animal Disease Prevention and Eradication		√		√
11	Animal Disease Surveillance and Veterinary Medic Services		√		√
12	Veterinary Public Health and Veterinary Drugs		√		√
TOTAL		3	9	4	8

Source: Analysis of the Writer

Note: S=Sustainable, NS=Non-sustainable, E=Empowerment, UE=Un-empowerment

From the table above can be known that this Department has 3 sustainable agriculture development programs and 9 non-sustainable agriculture development programs. From those programs also there are 4 agriculture development programs that lead to farmer empowerment and 8 of them do not lead to farmer empowerment.

Table 13

Categorization of Agriculture Development Programs conducted by Department of Animal Husbandry and Animal Health

No	Program	S-E	S-UE	NS-E	NS-UE
1	Breeding Development				√
2	Animal Feed and Technology	√			



	Development				
3	Animal Husbandry Development	√			
4	Animal Husbandry Business Development	√			
5	Processing and Marketing of Animal Husbandry Products		√		
6	Food Security	√			
7	Development of Animal Husbandry Potential Data	√			
8	Development and Empowerment of Animal Husbandry Human Resources	√			
9	Institutional Arrangement of Livestock Farmers	√			
10	Animal Disease Prevention and Eradication			√	
11	Animal Disease Surveillance and Veterinary Medic Services			√	
12	Veterinary Public Health and Veterinary Drugs	√			
TOTAL		3	0	1	8

Source: Analysis of the Writer

Note: S-E=Sustainable and Empowerment, S-UE=Sustainable and Un-Empowerment, NS-E=Non-sustainable and Empowerment, NS-UE=Non-sustainable and Un-Empowerment

From the table above can be seen that there are 3 sustainable agriculture development programs which conducted by Department and Animal Husbandry and Animal Health which lead to farmer empowerment, and only one non-sustainable agriculture development program that lead to farmer empowerment. It can be seen that this department has only little concern on sustainable agriculture development and farmer empowerment.

5.3.4 Department of Marine and Fishery



Department of Marine and Fisheries as the one of related local governmental working units which has main responsibility in developing agriculture sector in Malang Regency has conducted many agriculture development programs. However, not all of those programs support the implementation of sustainable agriculture development and lead to farmer empowerment.

a. Program of Economic Empowerment of Coastal Communities

This program aims to increase income and prevent decreased income in famine season of the coastal community by giving counseling in processing fish and other kind of business such as trade service. So, when the famine comes because of high ocean water, the coastal community still can earn income from other business activities.

It can be concluded that this program focused on economic aspect and concern on increasing farmer's income. This is not line with sustainable agriculture development which requires the concern on social and natural aspects also. However this program can be said as farmer empowerment program because the local government through Department of Marine and Fishery gives counseling that can increase the awareness of the farmers concerning their problem, and this is the first step of empowerment process

b. Program of Increased Awareness and Law Enforcement in the Utilization of Marine Resources

In the implementation of this program, Department of Marine and Fishery establishes Supervisor Community Group with the reason is the limited ability of government to monitor marine and fishery resources



utilization activities. This group is a community self-supporting organization (non-governmental organization) that helps governmental apparatus in monitoring all marine and fishery resources utilization activities. Through the implementation of this program, the society are expected to understand and aware the importance of maintaining resources and environmental sustainability.

This program fulfills the requirement of sustainable agriculture development to preserve the nature because it aims to protect the environment especially marine and fishery resources from over exploitation as the practice of green revolution which only focuses on increasing economic aspect. However, this is not empowerment program because the local government only create supervisor community group without giving any training which can increase their knowledge.

c. Program of Aquaculture Development

This program aims to increase the production of fish farming in this regency. In general, the amount of production of fish farming increase compared with the production in 2010, but the production in some sub-districts decrease, especially farmed fish production in reservoirs that caused by the decrease of reservoirs water quality biologically that is indicated caused by the reduction of plankton at downstream reservoirs, and also caused by diseases.

In the implementation of this program, first, Department of Marine and Fishery conducts data collection regarding Marine and fishery potential including fish production, number of fisherman, number of



facilities and infrastructure of marine and fisheries. And then, to overcome fish health problem, this department implement activity of fish health development by giving vaccine, vitamin, and special treatment for the sick farmed fish.

This department also develops and empowers Marine and Fishery Human Resources to increase production of aquaculture and cultivation of fish seed by giving training and technical guidance to the aquaculture businessman groups 5 times in a year and once for one group, also 4 times in a year for the counselor. Development of superior fish seed is also conducted by this department.

This program has the most focus on increasing economic welfare of the farmers by giving training on aquaculture business. So, because this program concern on economic aspect only by giving training, it can be classified as non-sustainable agriculture development program which does lead to farmer empowerment because sustainable agriculture development requires the concern on environmental and social aspect, and this program does not fulfill the requirement. However, this program increases the farmer's knowledge through training activities.

d. Program of Fisheries Development

This program aims to increase fisheries production in Malang Regency. In order to bring this objection into reality, the government through Department of Marine and Fishery gives capital assistances to fisherman such as fishing vessels, fishing gear, tool of fishing and fish



handling facilities on board, and also installation of Fish Aggregating Device (FAD). This department also builds fish auctions in coastal areas.

Actually this program is similar to the program of aquaculture development which focuses on increasing economic income of the farmers. The difference is this program conducted by giving capital assistance as a grant. This can increase the dependency of the farmers toward local government.

e. Program of Resources and Environmental Control

This program aims to manage the fishery utilization and also ocean and marine resources including mangrove forest and coral reefs.

Malang Regency has 344 hectares of mangrove forest which 56,5% of this is in damage condition. In 2011, Department of Marine and Fishery rehabilitates 2,7 hectare of mangrove forest in Tambakrejo Village.

Another marine resource is coral reefs. Coral reefs in some locations in this regency are in damage condition. Therefore, this department conducts artificial coral reef planting at the site of coral reef with high level of damage in coastal water of Purwodadi Village.

Basically, this program focuses on natural preservation by rehabilitating the damage mangrove forest where the mangrove forest damage can danger the next generation to fulfill their needs because the mangrove forest damage can bother the natural balance. This program has answered the sustainable agriculture principle to preserve the nature. However, this program does not involve the farmers and only conducted by Department of Marine and Fisheries, so it can be said that this program is not farmer empowerment program.



f. Program of Optimization of the Management and Marketing of Fishery Production

This program aims to optimize management and marketing of fishery production through conducting 4 activities namely:

1) Optimization of Marketing of Fishery Products

This activity is directed to the development of fishery product market and expansion of marketing network. In its implementation, Department of Marine and Fishery also gives capital assistance as stated by Mr. Hadarsono, Head of Division of Aquaculture:

"For this activity, this department gives assistance in the form of marketing support equipment such as lowry, motorcycle, table and receptacles" (Interview, September 26th, 2012).

From the interview can be seen that Department of Marine and Fishery gives capital assistance in the form of marketing support equipment such as lowry, motorcycle, and receptacles. This department also provide table for displaying the fish products.

2) Management Information of Market Demand for Fishery Products

In this activity, Department of Marine and Fishery only conducts coordination and field monitoring toward the availability of foods made of fish. This department also should determine the level of society's fish consumption by comparing the availability of fish product and the number of society in Malang Regency.

3) Optimization of Fishery Processing and Quality Improvement



This activity is directed to increase the quality and safety of fishery products, both for fresh fish and processed fish, and also to diversify processed fish products in order to add the value of fishery products. In its implementation, Department of Marine and Fishery gives capital assistance in the form of fish processing facilities as stated by Mr.Hadarsono, Head of Division of Aquaculture:

"This department gives fish processing facilities to the processors such as stoves, pan and cookware. And those fish can be processed become salted fish, dried fish, shredded fish, fermented fish pasta, stick, and chips. This regency doesn't have fish canning industry" (Interview, September 26th, 2012).

From the interview is also can be see that Malang Regency doesn't have fish canning industry.

4). Optimization of Capital and Investment Development

This activity is directed to fishery business development through promotion and dissemination of information to investors for investing their capital for fishery business in Malang Regency. Department of Marine and Fishery doesn't give any financial capital as stated by Mr.Hadarsono, Head of Division of Aquaculture.

"We don't provide financial assistance. We only provide information related to financial agency and procedure to get loan in general" (Interview, September 26th, 2012).

Reviewing the explanation above, it can be seen that this program is not sustainable agriculture development program which leads to



farmer empowerment because this program focuses on increasing economic income of the farmers by giving capital assistance. Giving capital assistance as a grant can increase the dependency of the farmers toward local government.

The same as other previous department, this department has conducted many agriculture development programs that can be classified into sustainable and non-sustainable and also leads to farmer empowerment or not. The table below provides that classification in the simpler way.

Table 14

**Classification of Agriculture Development Programs conducted
by Department of Marine and Fisheries**

No	Program	S	NS	E	UE
1	Economic Empowerment of Coastal Communities		√	√	
2	Increased Awareness and Law Enforcement in the Utilization of Marine Resources	√			√
3	Aquaculture Development		√	√	
4	Fisheries Development		√		√
5	Resources and Environmental Control	√			√
6	Optimization of the Management and Marketing of Fishery Production		√		√
TOTAL		2	4	2	4

Source: Analysis of the Writer

Note: S=Sustainable, NS=Non-sustainable, E=Empowerment, UE=Un-empowerment

From the table above can be seen that Department of Marine and Fisheries has non-sustainable agriculture development programs more



than sustainable agriculture development program. From those programs also can be seen that some sustainable agriculture development programs lead to farmer empowerment and some of them are not. This can be seen in the table below.

Table 15
Categorization of Agriculture Development Programs conducted
by Department of Marine and Fisheries

No	Program	S-E	S-UE	NS-E	NS-UE
1	Economic Empowerment of Coastal Communities			√	
2	Increased Awareness and Law Enforcement in the Utilization of Marine Resources		√		
3	Aquaculture Development			√	
4	Fisheries Development			√	
5	Resources and Environmental Control		√		
6	Optimization of the Management and Marketing of Fishery Production				√
TOTAL		0	2	3	1

Source: Analysis of the Writer

Note: S-E=Sustainable and Empowerment, S-UE=Sustainable and Un-Empowerment, NS-E=Non-sustainable and Empowerment, NS-UE=Non-sustainable and Un-empowerment

From the table above can be seen that Department of Marine and Fishery does not have sustainable agriculture development program that lead to farmer empowerment. All of its sustainable agriculture development does not lead to farmer empowerment. However this department has had a



big enough concern on farmer empowerment, especially farmer in coastal area.

5.3.5. Environment Agency

Environment Agency as the agency that has main responsibility in protecting the nature and environment has conducted many programs to preserve the nature that support the implementation of sustainable agriculture development in Malang Regency. Further information can be seen in the explanation below.

a. Program of Pollution and Environmental Destruction Control

This program aims to increase environmental quality in order to prevent environmental destruction and or pollution in land, freshwater, marine water, and air so that the society's right to get clean and healthy environmental quality can be fulfilled. In the implementation of this program, Environment Agency issues and implement regulations, technical guidance and standard quality related to environmental destruction and pollution control.

The Environment Agency monitors the quality of groundwater, and surface water including in the agricultural area, marine water and coastal region. This agency also supervises waste management and gives socialization about the danger of air pollution caused by smoking. In the implementation of this program, Environment Agency also plants 390 shade trees at markets, schools, arterial road sides and around other public facilities.



This is one of the natural preservation programs conducted by Environment Agency. This agency planting the trees and monitor environment quality to ensure that the environment is balance and sustainable for the next generation which can gives a positive impact to economic and social aspects. In this case the employees of Environment Agency implement this program by themselves without involving the farmers. So this program can be classified as sustainable agriculture development program that does not lead to farmer empowerment.

b. Program of Rehabilitation and Restoration of Natural Resources Reserves

This program aims to rehabilitate the damage nature and accelerate the recovery of natural resources reserves, so besides can serve as a life buffer system it also has potential that can be utilized sustainably. Related to the implementation of this program, Environment Agency carries out rehabilitation activity at headwaters area to guarantee the sufficiency of agricultural irrigation water supply, prevent erosion and sedimentation in river and coastal areas. This agency also carries out rehabilitation for the damage ecosystem and habitat inside and outside forest area, coastal area (coral reefs and mangrove) and also develops management system of forest and coastal areas.

Basically this program can be said that this program is similar to the program of Pollution Control and Environmental Destruction Control, because in this program, also aims to preserve the nature by rehabilitating the damage areas. Its difference from the previous program is this program does not only recover the forest area, but also



coastal area and other area outside the forest. Environment Agency conducted this program without any involvement of farmers, so it can be said that this program does not lead to farmer empowerment.

c. Program of Increased the Capacity of Natural Resources and Environment Management

This program aims to increase capacity of natural resources and environmental function through the implementation of good environmental governance based on principles of transparency, participation and accountability. In its implementation, Environment Agency increases the capacity of environmental education both formal and informal for society including farmer community, and also conducting legal settlement of the case of natural resources and environmental destruction. This agency also enforces productive community education through developing human resources capacity of environmental supervisor in order to increase the knowledge of self-support environmental supervisor.

This program can be said as sustainable agriculture development that leads to farmer empowerment because this program aims to preserve the nature by implementing good environmental government, and also by giving formal and informal education to self-support environmental supervisor who come from the society including the farmers.

d. Program of Protection and Conservation of Natural Resources

This program aims to protect natural resources from the damage, also manage the area around natural resources to guarantee its



ecosystem quality so it can serve as a life buffer system properly.

Through this program, Environment Agency develops the carrying capacity of the environment by planting 1.960 trees around three springs in Malang Regency so that this spring are expected to be able to reduce sufficient water especially for agricultural area.

As the two previous programs, this program also aims to preserve the nature by planting so many trees to maintain soil water availability and natural balance which in the future also can give positive impact on increasing economic benefit. However this is not farmer empowerment program because there is no farmer involvement in the implementation of this program.

Those programs that have been conducted by Environment Agency above can be classified into sustainable, non-sustainable agriculture programs, and also empowerment and un-empowerment programs. The table below provides the clear grouping of those programs, so it can be known what kind of agriculture development program that conducted by this agency.

Table 16
Classification of Agriculture Development Programs conducted
by Environment Agency

No	Program	S	NS	E	UE
1	Pollution and Environmental Destruction Control	√			√
2	Rehabilitation and Restoration of Natural Resources Reserves	√			√
3	Increased the Capacity of Natural Resources and Environment Management	√		√	
4	Protection and Conservation of Natural Resources	√			√
TOTAL		4		1	3

Source: Analysis of the Writer

Note: S=Sustainable, NS=Non-sustainable, E=Empowerment, UE=Un-empowerment

From the table above can be seen that Environment Agency has conducted many programs that support sustainable agriculture development program. However, there is no one of those programs lead to farmer empowerment. The detail classification to get easier understanding can be seen in the table below.

Table 17

Categorization of Agriculture Development Programs conducted by Environment Agency

No	Program	S-E	S-UE	NS-E	NS-UE
1	Pollution and Environmental Destruction Control		√		
2	Rehabilitation and Restoration of Natural Resources Reserves		√		
3	Increased the Capacity of Natural Resources and Environment Management	√			
4	Protection and Conservation of Natural Resources		√		
TOTAL		1	3	0	0

Source: Analysis of the Writer

Note: S-E=Sustainable and Empowerment, S-UE=Sustainable and Un-Empowerment, NS-E=Non-sustainable and Empowerment, NS-UE=Non-sustainable and Un-empowerment

From the table above, it can be seen Environment Agency has a big concern on natural preservation that support and give positive impacts toward sustainable agriculture development in Malang Regency. However,



this agency only has a little concern on society empowerment, especially for the farmer community.

5.3.6 Department of Irrigation

As one of department which has responsibility and the big influence in promoting sustainable agriculture development in Malang Regency, Department of Irrigation carried out several development programs and activities during the period year of 2011. As the other department, not all of its programs support the implementation of sustainable agriculture development and leads to farmer empowerment. Those programs and activities can be seen in the explanation below.

a. Program of Development and Management of Irrigation Network, Swamp, and other Irrigation Networks.

This program aims to provide adequate and equitable water for the sustainable human life and also to preserve the irrigation infrastructure that has been built. In order to achieve those aims, the Department of Irrigation carried out maintenance and rehabilitation activities for irrigation networks, and also builds new irrigation networks in certain area including in the agricultural area that has been planned in the previous year. However, there are several factors that become inhibiting factors such as minimum budget, lack of coordination among construction implementer, consultant and supervisor, and also bad condition of road that cause difficulties in sending the materials to the construction location.

This program will give a positive impact on agricultural sector both in the term of natural and economic aspect because through the



implementation of this program; the soil quality of agricultural land can be maintained. Furthermore the good quality of soil will result in good agricultural product that can increase farmer's income. However, this program only can be conducted by Department of Irrigation in collaboration with construction expert without involving the farmers, so this program does not lead to farmer empowerment.

b. Program of Development, Management, and Conservation of Rivers Lake, and other Water Resources

This program aims to provide water resources information system through the availability of the very latest data, and also to create an effective and efficient water allocation system so it can increase the productivity of water resources utilization including its utilization in the agricultural area. In order to achieve those aims, Department of Irrigation makes collaboration with a consultant agency.

In its implementation, the low quality and understanding of the implementer actors that consist of the staff of Department of Irrigation and consultant agency toward design pictures and technical specification, the limited data availability and budget make this program cannot be implemented maximally.

Basically, this is a data collection process activity to make water allocation system and mapping. In addition this program conducted in collaboration with a consultant agency without involving the farmers. So it can be said that this is not sustainable agriculture development program that lead to farmer empowerment.

c. Program of Flood Control



This program aims to create the sustainability of water resources and increasing environmental quality. For achieving this program, the Department of Irrigation build dams and walls around irrigation canals especially in agricultural area in order to reduce the possibility of fertile soil erosion, provide the materials needed for overcoming the emergency damage caused by flood, and also provide tools for measuring water debit.

In fact, this program cannot be implemented maximally because lack of adequate infrastructure that causes the difficulties in reaching the flood area so the materials needed for overcoming the emergency damage caused by flood can be distributed on time. The second factor is lack of society participation in controlling flood and developing Irrigation infrastructure after the flood.

Basically, this program is a natural preservation program by preventing environmental damage caused by flood by building dams. With the consideration that sustainable agriculture development requires more concern on natural preservation, it can be said that this program has been in line with sustainable development principle. However, this program does not lead to farmer empowerment because there is no involvement of the farmer in the implementation of this program.

From the explanation concerning those programs that conducted by Department of Irrigation, it can be seen that this department has big enough concern on sustainable development, including in the agriculture sector, but there is no concern on farmer empowerment. This can be seen in the table below.



Table 18
Classification of Agriculture Development Programs conducted
by Department of Irrigation

No	Program	S	NS	E	UE
1	Development and Management of Irrigation Network, Swamp, and other Irrigation Networks	√			√
3	Development, Management, and Conservation of Rivers Lake, and other Water Resources		√		√
4	Flood Control	√			√
TOTAL		2	2		4

Source: Analysis of the Writer

Note: S=Sustainable, NS=Non-sustainable, E=Empowerment, UE=Un-empowerment

From the table above can be seen that Department has two development programs that support sustainable agriculture development in Malang Regency. However, from that program, there is no program that leads to farmer empowerment. The table below provides the clearer classification concerning those programs.



Table 19

Categorization of Agriculture Development Programs conducted by Department of Irrigation

No	Program	S-E	S-UE	NS-E	NS-UE
1	Development and Management of Irrigation Network, Swamp, and other Irrigation Networks		√		
3	Development, Management, and Conservation of Rivers Lake, and other Water Resources				√
4	Flood Control		√		
	TOTAL	0	2	0	2

Source: Analysis of the Writer

Note: S-E=Sustainable and Empowerment, S-UE=Sustainable and Un-Empowerment, NS-E=Non-sustainable and Empowerment, NS-UE=Non-sustainable and Un-empowerment

From the table above can be seen that Department of Irrigation does not has concern on farmer empowerment at all. This department does not have a program that lead to farmer empowerment. However, almost most of this department programs support the practice of sustainable agriculture development in Malang Regency.

5.3.7. Food Security and Counseling Implementer Agency



Food Security and Counseling Implementer Agency is an agency which has a big role and influence in supporting the practice of agriculture development in Malang Regency especially in the term of farmer empowerment. However, most of this agency's programs do not lead to farmer empowerment. The explanation below provides deeper information concerning this matter.

a. Program of Increasing Food Security

This program aims to increase the ability of agricultural areas in providing foodstuff. Furthermore, this program aims to create and develop food self-sufficient villages. A food self-sufficient village is a program for villages which has poverty level 30% or more than 30% of the total population. The government gives 100 million Rupiahs for every poor village in order to cultivate agricultural land and buy food seeds which are suitable with its agricultural land condition. This program also develops rural barns and organizes competition in creating new food menu.

This program aims to increase food security, however, the government gives a grant in a big amount of money to cultivate the agriculture land and buy agricultural seeds and also building rural barns.

This program does not support the practice of sustainable agriculture development because there is no concern on social aspect and natural preservation. In addition, there is no training to utilize this grant and cultivate the land, so this program cannot make the farmers more empower and independent.

b. Program of Increasing Farmer's Welfare



This program aims to increase farmer's welfare, especially in the term of increasing income. In this program, Food Security and Counseling Implementer Agency provide counseling and mentoring activity for the farmers and agribusiness entrepreneurs once a week. This activity is held once in a week for every farmer groups. In this activity, the counselor from Food Security and Counseling Implementer Agency shares knowledge on proper farming technique, and also deliver some assistance/grant from the government such as fertilizer and seeds.

But, in its practice, the match time between farmers and counselor become inhibitor, as stated by Mr. Sukobagyo, secretary of Food Security and Counseling Implementer Agency:

"The time between farmer and counselor doesn't match. In the morning until evening, the farmers work in farm field. While the counselor has office ours to give counseling in the morning until afternoon. Educational level of farmers also makes the counselor difficult to transfer knowledge" (Interview on November 4th, 2012 at 10 am).

From the interview above can be known that the time between counselor and farmers which is not match, where the farmers have free time to join in the counseling activity at night, while the counselors have office our in the morning. In addition, low educational level of the farmer also makes transfer of knowledge activity need long time to be success.

This program actually focuses on economic aspect because the aim of this program is increasing farmer's income by giving counseling and mentoring activity to the farmers, so they have new knowledge in



agribusiness. This program is a farmer empowerment program but do not supports sustainable agriculture development program because only concern on economic aspect and there is no concern on natural preservation.

c. Program of Increasing Agricultural/Plantation Production Marketing

This program aims to introduce the local superior products and increase harvest production marketing, also reconcile between agriculture businessman and capitalist through held or joining in the exhibition activity in local until national level.

This program actually concern on increasing economic aspect by opening market network through joining in the exhibition. Unfortunately, the farmers cannot join in this exhibition, otherwise the local government employee and agriculture businessman. Therefore, this program is not sustainable agriculture development program and does not lead to farmer empowerment.

From the explanation above can be seen that those program can be classified into sustainable and non-sustainable agriculture development, and also empowerment and un-empowerment programs. The table below provides the clearer classification of those programs in the simpler way to make easier to be understood.

Table 20

Classification of Agriculture Development Programs conducted by Food Security and Counseling Implementer Agency

No	Program	S	NS	E	UE
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1	Increasing Food Security		√		√
2	Increasing Farmer's Welfare		√	√	
3	Increasing Agricultural/Plantation		√		√
TOTAL		0	3	1	2

Source: Analysis of the Writer

Note: S=Sustainable, NS=Non-sustainable, E=Empowerment, UE=Un-empowerment

From the table above can be seen that Food Security and Counseling Implementer Agency has not conducted the programs that support the practice of sustainable agriculture development in Malang Regency. However from those programs, there is program that lead to farmer empowerment. This can be seen in the table below.

Table 21

Categorization of Agriculture Development Programs conducted by Food Security and Counseling Implementer Agency

No	Program	S-E	S-UE	NS-E	NS-UE
1	Increasing Food Security			√	
2	Increasing Farmer's Welfare			√	
3	Increasing Agricultural/Plantation Production Marketing				√
TOTAL		0	0	1	2

Source: Analysis of the Writer

Note: S-E=Sustainable and Empowerment, S-UE=Sustainable and Un-Empowerment, NS-E=Non-sustainable and Empowerment, NS-UE=Non-sustainable and Un-empowerment

From the table above can be seen that Food Security and Counseling Implementer Agency has implemented two programs that do not support the practice of sustainable agriculture development and also do not lead to farmer empowerment. In addition, there is only one program of



development that concern on farmer empowerment although this agency has main responsibility in empowering the farmers.

From the explanation concerning the programs that have been conducted by all related local governmental working unit can be seen that some of the development programs only prioritized economic improvement and ignored natural preservation and social improvement, especially in the term of social capital improvement by increasing human resources quality to be able to more independent. Furthermore, many programs that are conducted by all related departments and agencies have potential in increasing the dependency of the farmers to the government. It is because the local government more often gives capital assistance totally as a grant than empower the farmers by giving training or new knowledge that is more important to increase the human resource quality of the farmer to be more independent. In addition, the chemical usage is also still found in the implementation of those programs, especially in the utilization of fertilizer (see picture 17) and pest trap method. While prioritized economic improvement only is the goal of green revolution which has been proven give negative social and natural impacts. In some case, the program is supporting the implementation of sustainable agriculture development, but the practice of this program is the same as the implementation of green revolution. It can be seen in the table 22 below which explained about all agriculture development programs that have been created and implemented by all related local governmental working units of this regency.



Table 22

Sustainable and Non-Sustainable Agriculture Development Program Conducted by Related Departments and Agencies

Department/Agency	Sustainable Programs	%	Non- sustainable Programs	%
Department of Agriculture and Plantation	b, i, k	27,27	a, c, d, e, f, g, h, j	72,73
Department of Forestry	b, c, d, e, f, h, i, k, l	75,00	a, g, j	25,00
Department of Animal Husbandry and Health	b, d, h	25,00	a, c, e, f, g, i, j, k, l	75,00
Department of Marine and Fisheries	b, e	33,33	a, c, d, f	66,67
Environment Agency	a, b, c, d	100		0
Department of Irrigation Food Security and Counseling Implementer Agency	a, c	66,67	b	33,33
		0,00	a, b, c	100,00

Source: Analysis of the Writer

Note: The numbers in the table are the number of programs of each related departments and agencies. It can be seen in chapter V.

From the table can be seen that most of related local governmental working units created and conducted the programs that do not support the implementation of sustainable agriculture development. Most of them conducted

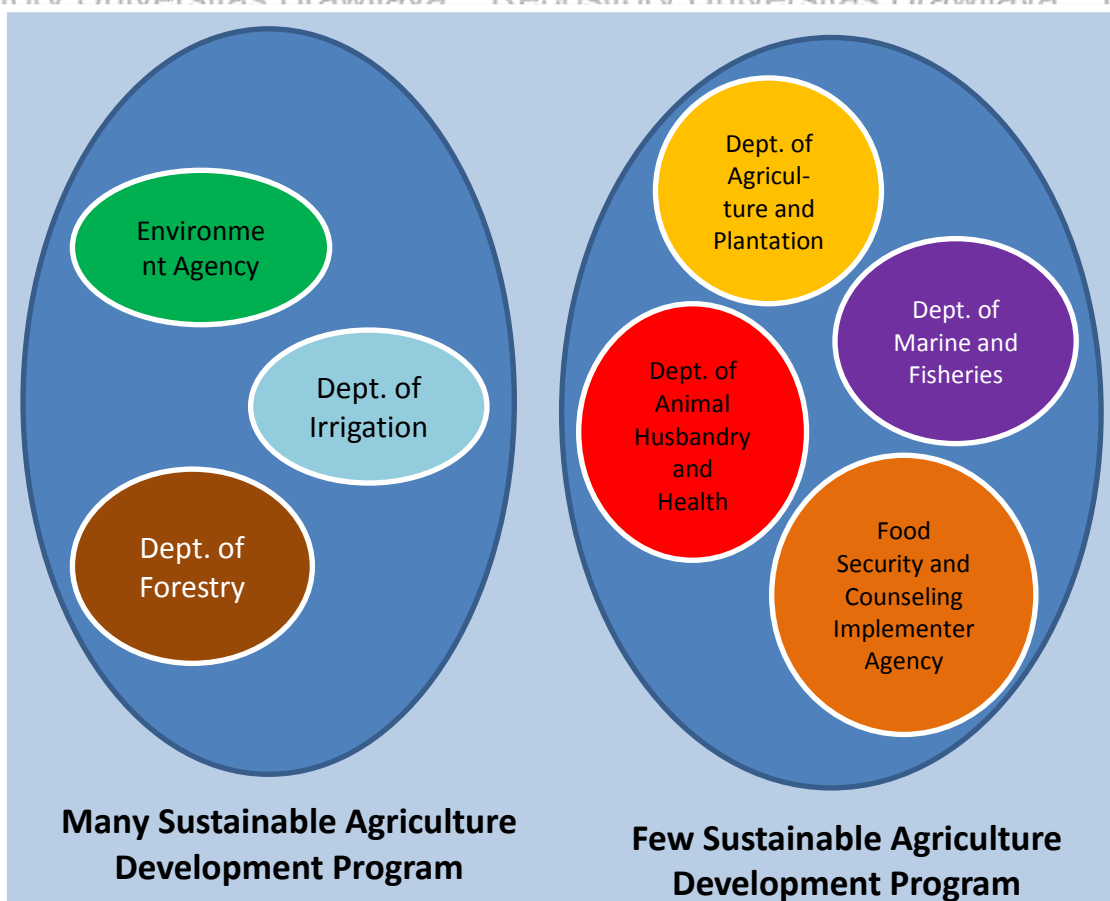


development programs that are non-sustainable. From 7 local governmental working units, there are only 2 local governmental working units that conducted more sustainable agriculture development program than others, they are Department of Forestry and Environment Agency. While Department of Agriculture and Plantation only conducted 27,27% sustainable agriculture development program of the total 11 agriculture development program. Even there is no sustainable agriculture development program conducted by Food Security and Counseling Implementer Agency.

In addition, from the table above also can be seen what related local governmental working unit that conducted many and few sustainable agriculture development programs. In order to get easier understanding, the picture 20 below describe the grouping concerning related department and agency which conducted many and few sustainable agriculture development program.

Picture 20

**Related Departments and Agencies which Implemented
Many and Few Sustainable Agriculture Development Program**





From the picture above also can be seen that all local governmental working units of

Malang Regency which have responsibility in promoting sustainable agriculture in this regency can be grouped into two kinds of group based on the amount of sustainable agriculture development program that have been conducted compared with the their total agriculture development program. It can be seen that Department of Agriculture and Plantation, Department of Irrigation, Department of Marine and Fishery, Department of Animal Husbandry and Animal Health and also Food Security and Counseling Implementer Agency are in the group of non-sustainable. It means that those department and agency only conducted few sustainable agriculture development programs than non-sustainable agriculture development program.

Based on the principle of empowerment which emphasizing on human development by acquiring and increasing knowledge and skill in order to be able to be more independence, can participate in development activities and free from the dependence trap, especially the dependency toward local government, those agriculture development programs that created and implemented by Local Government of Malang Regency can grouped into two kinds namely empowerment and un-empowerment programs. The table 23 below provides description concerning this matter.



Table 23

**Empowerment and Un-empowerment Agriculture Development Programs
Created and Implemented by Related Departments and Agencies**

Department/Agency	Empowerment Programs	%	Un- empowerment Programs	%
Department of Agriculture and Plantation	a, b, c, d, h	45,45	e, f, g, i, j, k	54,55
Department of Forestry	b, k, l	25,00	a, c, d, e, f, g, h, i, j	75,00
Department of Animal Husbandry and Health	b, d, e, h	33,33	a, c, f, g, i, j, k, l	66,67
Department of Marine and Fisheries	a, c	33,33	b, d, e, f	66,67
Environment Agency	c	25,00	a, b, d	75,00
Department of Irrigation Food Security and Counseling Implementer Agency	b	0,00 33,33	a, b, c a, c	100,00 66,67

Source: Analysis of the Writer

Note: The numbers in the table are the number of programs of each related departments and agencies. It can be seen in chapter V.

From the table above can be seen that most of the agriculture development program that created and implemented by all related departments and agencies do not lead to society empowerment, especially for the farmers.

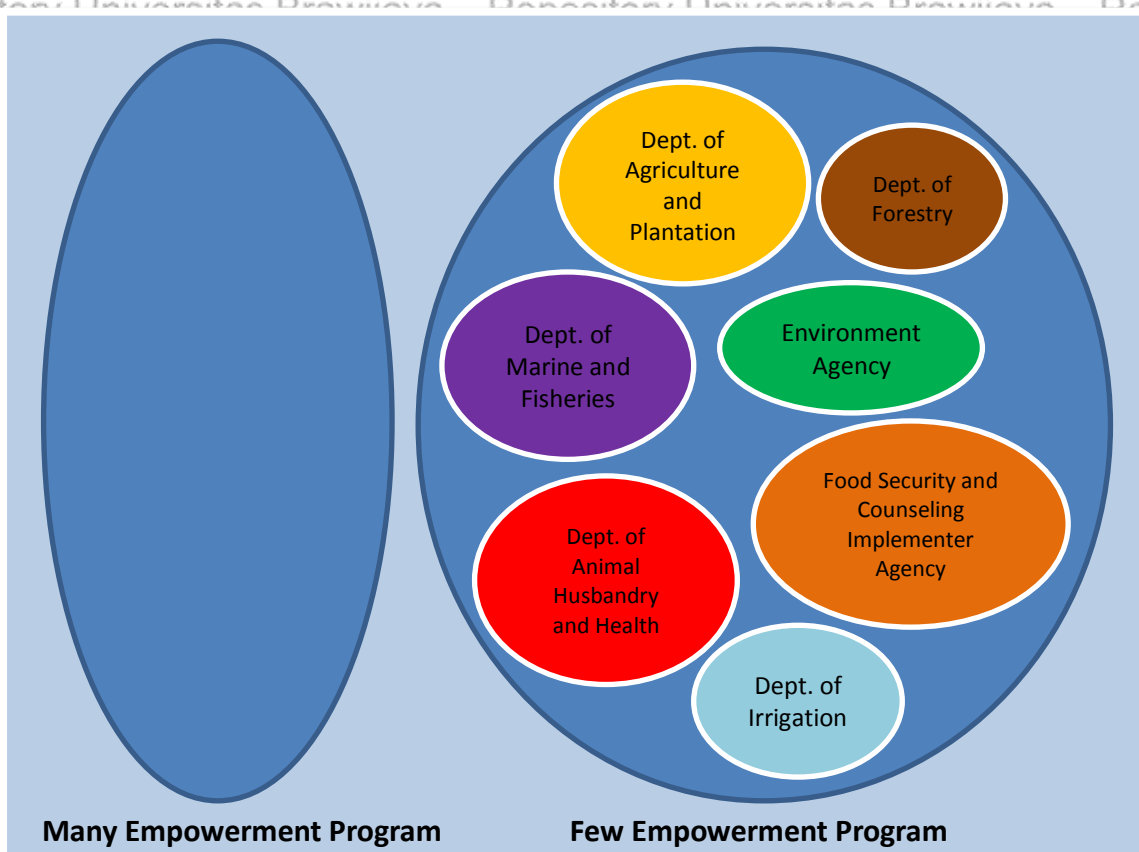


The table shows that Department of Agriculture and Plantation is the department which conducted most of empowerment programs although these only 45,45% of its total 11 programs of agriculture development. The Food Security and Counseling Implementer Agency as the related local governmental working unit which has main responsibility in empowering the farmers by giving training, counseling and other empowerment activities only created and implemented 33,33% empowerment program of its total 3 programs for developing agriculture sector in this regency.

In addition, from the table above is also can be known what related departments and agencies that conducted many and few development agricultural programs which lead to empowerment of farmer community. In order to get easier understanding, the picture 21 below describe the grouping of related departments and agencies which conducted many and few agriculture development program that leads to farmer empowerment.

Picture 21

Related Departments and Agencies which Implemented Many and Few Agriculture Development Program that Leads to Farmer Empowerment





From the picture above is can be seen that there are no departments and agencies that implemented agriculture development programs that lead to farmer empowerment. It is because those departments and agencies more emphasize on the implementation of un-empowerment program than empowerment program. Each departments and agencies conducted agriculture development programs that lead to farmer empowerment less than 50% of their total development programs.

Taking a consideration to this condition, it can conclude that Local Government of Malang Regency has created and implemented only a few empowerment programs. Furthermore, it can almost be ensured that most of the farmers in this regency has not independent yet and still has a high dependency toward local government. In addition, with the consideration that more than 60,42% of the people in this regency has low educational level and most of them has livelihood in agriculture sector, the empowerment program is very important and really needed by the farmers to increase their human resources quality so that they can develop agriculture properly and increase their welfare, also achieve sustainable development in agriculture sector.

After reviewing agriculture development and farmer empowerment program that has been conducted by all related local governmental working unit, it can be knows that local government of Malang Regency through its all related departments and agencies only conducted a little number of sustainable



agriculture development program that lead to farmer empowerment. Most of their development programs even do not support the implementation of sustainable agriculture in this regency. This matter can be seen in the table below.

Table 24

Categorization of Agriculture Development Programs conducted by All Related Departments and Agencies

No	Department/Agency	S-E	S-UE	NS-E	NS-UE
1	Department of Agriculture and Plantation	1	2	4	4
2	Department of Forestry	3	6	0	3
3	Department of Animal Husbandry and Animal Health	3	0	1	8
4	Department of Marine and Fishery	0	2	3	1
5	Environment Agency	1	3	0	0
6	Department of Irrigation	0	2	0	2
7	Food Security and Counseling Implementer Agency	0	0	1	2
TOTAL		7	16	8	22

Source: Analysis of the Writer

Note: S-E=Sustainable and Empowerment, S-UE=Sustainable and Un-Empowerment, NS-E=Non-sustainable and Empowerment, NS-UE=Non-sustainable and Un-empowerment

From the table above can be seen that not all related departments and agencies conducted sustainable agriculture development program that lead to farmer empowerment. There are 3 departments and 1 agency that conducted this kind of program. In addition, this kind of program is not the main program of those



departments and agencies, it is only 13,20% of the total agriculture development programs that conducted by all related departments and agencies. Furthermore, it can be concluded that the implementation of sustainable agriculture development in Malang Regency has not be able to be implemented well and does not lead to farmer empowerment.

5.4. Supporting and Inhibiting Factors

In every development process and activities, there are always factors that supports and even inhibit the success of development. In the case of sustainable agriculture development practice in Malang Regency, there are more inhibiting factors than supporting factors. This inhibiting factors come from both all related departments and agencies an also the farmers itself.

5.4.1. Supporting Factors

In the of sustainable agriculture development in Malang Regency, there are several supporting factors that are expected to be able to make the implementation of sustainable agriculture development program in this regency can be implemented properly. Those supporting factors can be seen more detail in the explanation below.

a. Clear Legal Framework

In order to promote sustainable agriculture development in Malang Regency, this regency has formulated many legal frameworks in the form of local regulation that can support and become guidance for the employee of all related departments and agencies in conducting their job.

As stated by Mr. Muftohul Fauzy, the Head of Sub-Division of Data Collection and Identification of Department of Irrigation:



"Related to the implementation of sustainable agriculture development, we have legal regulation as our guidance. These regulations do not specifically discuss about sustainable agriculture development, but this emphasize on the requirement to implement sustainable development in all development sectors including agriculture sector, they are at least Local Regulation of Malang Regency Number 7 of 2010 on Control of Pollution and Environmental Damage, and also Local Regulation of Malang Regency Number 6 of 2008 concerning Long Term Development Planning 2005-2025" (Interview on September 27th, 2012 at 13.00).

From the interview above can be known that at least there are three local regulations that support the implementation of sustainable development in all sectors of development, including in agriculture sector.

b. Sufficient Working Infrastructure

Local Government of Malang Regency also support all related departments and agencies to implement sustainable development in the agriculture sector by providing appropriate working infrastructure for them.

As stated by Mr. Arifin, the head of Division of Agricultural Business of the Department of Agriculture and Plantation:

"We has appropriate working infrastructure to support our works, and as I know other departments and agencies also have the same" (Interview on November 28th, 2012 at 14.00 pm).



From the interview above can be known that all related departments and agencies has had appropriate working infrastructure that can support their work in developing sustainable agriculture in this regency.

For the supporting factor, the Local Government of Malang Regency has formulated clear legal framework in the form of Local Regulation as guidance for all related department and agencies in conducting their works and responsibilities. Even the government of this regency has provided appropriate and sufficient working infrastructure for all related departments and agencies. These two supporting factors are enough to make those related departments and agencies able to implement their work and responsibility safely and properly in developing sustainable agriculture in this regency.

5.4.2. Inhibiting Factor

Sustainable agriculture development program in Malang Regency has not been implemented optimally, and it causes sustainable agriculture in Malang Regency seems difficult to be achieved. According to the explanation of some employees of those departments and agencies, there are several factors that causes sustainable agriculture in Malang Regency is still far from what it should be. Those factors can be seen in detail in the explanation below.

a. Lack of Commitment

One of factors that cause sustainable agriculture in Malang Regency difficult to be achieved is lack of commitment from each of the officers and agencies to carry out development programs. As stated by



Mr. Victor Sembiring, Head of Sub-Division of Planning, Evaluation, and Reporting of the Department of Animal Husbandry and Animal Health:

"For me, the major cause is lack of commitment of employees and department itself in implementing development programs. Those programs are implemented or not don't affect their salary"

(Interview on September 19th, 2012 at 11 am).

From the interview above, it can be seen that the employees of those related departments and agencies have no strong commitment to implement the programs because they will receive the same amount of salary as before even though they try so hard to really implement those programs to be successful.

b. Separation of Counselor from Each Department

Separation of counselor from each departments and collect them in one special agency is also one of the inhibiting factor, as stated by Mr. Victor Sembiring, Head of Sub-Division of Planning, Evaluation, and Reporting of the Department of Animal Husbandry and Animal Health:

"In the past, every department has counselors, but now those counselors are withdrawn from each department and collected in Food Security and Counseling Implementer Agency (FSCIA). This condition make the implementation program, especially empowerment programs difficult to be conducted, at least it is late to be done because every department must pass through long process and procedure for coordination with FSCIA" (Interview on September 19th, 2012 at 11 am).



In line with the opinion of Mr. Victor Sembiring above, Mr. Arifin, the head of Division of Agricultural Business of the Department of Agriculture and Plantation stated:

"Now, if we have empowerment program, we should make coordination with FSCIA, and it needs long time process and procedure" (Interview on July 4th, 2012 at 13.30 pm).

From the interview above, it can be seen that the separation of counselor from each departments make those departments, pass through long process and procedure for coordination with FSCIA. This condition causes the implementation of programs, especially empowerment program difficult and late to be conducted.

Along with the statement of Head of Sub-Division of Planning, Evaluation, and Reporting, Department of Animal Husbandry and Animal Health, Mr. Hadarsono, Head of Division of Aquaculture of the Department of Marine and Fishery:

"The separation of the counselor from this department becomes inhibiting factor in the implementation of development programs.

This policy has been implemented in Malang Regency since 2008 based on National Regulation Number 16 of 2006 concerning Counseling System of Agriculture, Fishery and Forestry" (Interview on September 27th, 2012 at 10 am).

From the interview above, it can be known that the separation of counselor from each department has been implemented in Malang Regency since 2008 by the creation of new agency namely Food Security and Counseling Implementer Agency based on National Regulation



Number 16 of 2006 concerning Counseling System of Agriculture, Fishery and Forestry.

c. Lack of Cooperation and Enormous Ego Among Department and Agencies

The other inhibiting factor is lack of cooperation among those related department and agencies. This is along with the statement of Mr. Victor Sembiring, Head of Sub-Division of Planning, Evaluation, and Reporting of the Department of Animal Husbandry and Animal Health:

"According to my observation and experience, every departments and agencies is still running separately by themselves. There is no cooperation and try to run every program they have made individually because every local governmental working unit has their own target of each work" (Interview on September 19th, 2012 at 11 am).

From the interview above can be known that every local governmental working unit is running their own program separately by themselves because they have made their own program and the have their own target that should be achieved in their work periods.

Furthermore, every department have enormous ego so they cannot cooperate and adapt each other, even concerning the difference of method utilization in collecting data. This is along with the statement of Mr. Muftohul Fauzy, the Head of Sub-Division of Data Collection and Identification of Department of Irrigation:

"Every department uses different method in data collection process; it cause every department have different data for a same



specification of data. Actually, every department can use the same method, but it depend on them whether they want to use the same method as we use or not” (Interview on November 6th 2012 at 08.30 am).

From the interview above, it can be seen that Department of Irrigation doesn't want to adapt to other departments and insist that other departments should adapt to this department, especially in collection data process.

This matter also makes clear by Mr. Budianto Hermawan, the head of Ideology and Human Right, United Nation and Politic Agency who stated that:

“It is difficult to implement development program, because every department has their enormous ego so they cannot cooperate and adapt each other. It inhibits development process in this regency” (Interview on June 15th 2012 at 10.20 am).

From the last interview in this section, it can be known clearly that the enormous ego of every departments makes them cannot cooperate each other and make development program difficult to be implemented.

d. Socio-culture of the farmers

Malang Regency has fertile land, much water with cool climate that is suitable for agricultural activity; therefore this regency has good potential in agriculture sector. This condition affects socio-culture of the farmers as stated by Mr. Hadarsono, Head of Division of Aquaculture of the Department of Marine and Fishery:



"Farmers in this regency are not strong and tough enough because they are always pampered by the nature. Fertile land, sufficient water and cool climate, many marine products, everything is available in this regency. This condition makes them lazy to develop agriculture technology, so the progress of agriculture sector is very slow" (Interview on September 27th, 2012 at 10 am).

From the interview above can be known that good condition of Malang Regency for agriculture activities makes the farmers lazy to develop agricultural technology. The laziness of the farmers in developing agriculture technology makes the progress of agriculture sector very slow.

In addition, the human resources quality of the farmers is still low; this condition makes them only think about economy in the short term, not about environment and social development, as stated by Mrs. Tridiyah Maistuti, Head of Environment Agency:

"Most of farmers in this regency have low educational level; it has effect in the low quality of human resources. This condition makes them only think about getting higher economic income in the short term without paying attention in the importance of environmental management and protection" (Interview on July 24th, 2012 at 10.15 am).

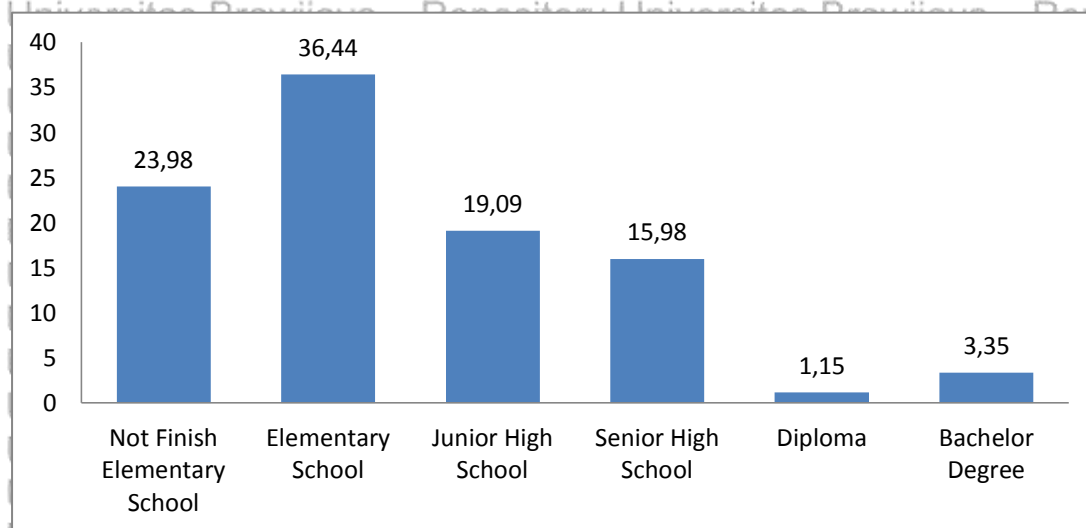
From the interview above, it can also be known that most of the farmers don not pay attention to the importance of environmental management and protection.



This statement of the head of Environment Agency above is also strengthened by the data concerning Society's Job of Malang Regency in chapter IV which stated that almost 50% of the total population in Malang Regency has job in agriculture sector and also the data concerning the educational level of Malang Regency's society and also the amount of Malang Regency's society who has livelihood in agriculture sector below.

Graphic 1

The Percentage of Educational Level of Malang Regency's Society



Source: Environment Agency of Malang Regency, 2011:22

Malang Regency only acquire education only in Elementary School, it is about 36,44% of the total population in this regency. Furthermore, around 23,98% of the population in this regency do not finish his education in Elementary School.

So from the data concerning Society's Job and Society's Educational Level of this Regency can be assumed that most of the farmers in this regency still has low educational level. This assumption is also strengthened by the stamen of Mr. Sukobagyo, the secretary of Food Security and Counseling Implementer Agency below:



"Most of our farmers graduated from Elementary School, even

most of them did not complete their education in Elementary School. As I know, not more than 10 people of the society in this regency with high educational background work as the farmers"

(Interview on November 21st, 2012 at 10.00 am).

From the interview above, it can be known that there are only a few people with high educational level working as farmers and most of them only graduated from Elementary School, even, they do not finish the education in Elementary School.

e. Insufficient Number of the Employees

Most of the employee said that they have too much work load, and said that the government needs to increase the number of employee so their work load can be reduced and they can perform better. As stated by Mr. Hadarsono, Head of Division of Aquaculture:

"Our department is lack of personnel, so the workload and the number of employee is not balance" (Interview on September 27th, 2012 at 10 am).

The same opinion is also stated by Mr. Muftohul Fauzy, the Head of Sub-Division of Data Collection and Identification of Department of Irrigation:

"Our personhel are not appropriate with our workload. We need more employees" (Interview on November 6th, 2012 at 08.30 am).

From the interview above can be seen that the officer of related departments and agencies feel that the number of employee in those departments and agencies are not appropriate with their work load and need more employee to help them in finishing their work.



f. Limited Budget and Inaccuracy of Data

The other inhibiting factor is unavailability and inaccuracy of data, as stated by Mr. Imam, the head of Division of Land and Forest Rehabilitation of the Department of Forestry:

"We don't have any up-to-date data for some kind of specification, such as the total area of community forest, the spread of kind of forestry trees because those lands is belong to the community, so they have full right to change the utilization. The last update data is the data of 2003. And for updating the data, we need to survey in the field directly while it will need so much budget and long time period of work" (Interview on June 30th, 2012 at 08.15 am).

Along with the opinion above, Mr. Sukobagyo, secretary of Food Security and Counseling Implementer Agency also said:

"The most important thing is data, but we don't have accurate data. It is difficult to be provided. For example is the data about commodity, market it should be updated every month or week, even every day. But, it will need so many budgets to provide related supporting infrastructure while we have very limited budget" (Interview on November 4th, 2012 at 10 am).

From those interviews above, it can be seen that the inaccuracy of data becomes one of inhibiting factor which inhibit the government in decide an appropriate policy. The inaccuracy data is caused by the limited budget from the government for every local governmental working unit for updating the data.



Furthermore, Mr. Muftohul Fauzy, the Head of Sub-Division of Data Collection and Identification of Department of Irrigation stated that inaccuracy of data is also caused by another factor:

"You have found that the data from every department is different even for the same specification of data. It is because every department uses different method in data collection process, for example data about the amount of agriculture area, Department of Agriculture and Plantation measures it based on land utilization while we measure it based on the number of irrigation area"
(Interview on November 6th, 2012 at 08.30 am).

From this last interview in this section can be seen that the other cause of inaccuracy of data is because every department uses different method in data collection process. It result different data even for the same kind of specification data.

Basically, most of inhibiting factors come from the personnel of every related departments and agencies. It can be seen from the lack of commitment of the personnel of those related local governmental working units in creating and implementing sustainable agriculture development properly even though has been completed by clear legal framework and appropriate working infrastructure. This also can be seen from the lack of coordination among those department and agencies in creating and implementing the programs. Whereas, coordination among all related departments and agencies is very important in the agriculture development, especially for the programs that related to giving training and other transfer of knowledge activities. However, in its practice, this coordination activity



among those departments and agencies should possess a long procedure and make the agriculture development programs late to be implemented. In addition, because of this long procedure, the empowerment programs are late to be delivered to the farmers.

Those inhibiting factors above inhibit the success of sustainable development in agriculture sector in Malang Regency because sustainable agriculture requires the integration and commitment of those implementing actors. If these inhibiting factors cannot be completely removed, it can be ensured also that sustainable agriculture development also cannot be achieved in this regency.

Another inhibiting factor that should be more considered is the socio-culture condition of the people in Malang Regency, especially concerning low-educational level of the farmers. As explained before that 36,44% of the population in Malang Regency only graduated from Elementary School, even 36,44% of them did not finish their education in Elementary School, while almost 50% of this regency's population works in agriculture sector. This condition makes transfers of knowledge activities difficult to be conducted. Those related departments and agencies especially Food Security and Counseling Implementer Agency which has main responsibility to give transfer of knowledge activities to the farmers need a long time to make the farmers understand about the educational material because this agency should delivered the same knowledge in many times in order to make the farmers understand.

Considering this condition, the empowerment programs which have focus on human development needs to be implemented more well and



properly to the farmers in Malang Regency. The farmers in this regency as the main actor in agriculture development need to be more empowered by giving more training and other knowledge so they have better knowledge and skill to response the challenges in developing agriculture sectors that will lead to the achievement of their welfares and also the success of sustainable agriculture development in this regency.



CHAPTER VI

CONCLUSION AND RECOMMENDATION

In this chapter, the researcher would like to derived conclusion concerning the finding of the research. In addition, the researcher would also like to propose some suggestions related to sustainable agriculture development and community empowerment in Malang Regency, East Java Province, Indonesia. This can also be used as a reference for other researchers who would like to study about sustainable agriculture development and community empowerment.

6.1. CONCLUSION

From the explanation of the previous chapters concluded that development in Malang Regency generally conducted by dividing the area into six development areas based on the potential which is owned by each development area. While for the agriculture sector, this sector is spread throughout this regency's area. Reviewed from the agriculture development programs that have been created and conducted by all related local governmental working units in this regency, those programs classified into six kinds of programs namely institutional strengthening, natural protection and conservation, human resources development, giving capital assistance, chemical usage, and agriculture infrastructure strengthening.

With the consideration that sustainable agriculture development basically tries to increase economic aspect while preserving the nature so that the practice of agriculture activities are sustainable up to the next generation and gives



positive impacts toward social aspect of the community, especially farmer community. Moreover, some previous researches stated that education is very important in promoting sustainable agriculture development because education can increase the human capacity in order to be able to think better and address environment and development issues, while increasing the human capacity through education is the essence of empowerment approach.

Based on the argument above, the programs that have been conducted by all related departments and agencies in Malang Regency classified into sustainable and non-sustainable agriculture development, and also classified into empowerment and un-empowerment programs. However, most of those programs do not lead to sustainable agriculture development because chemical input still dominates the implementation of those programs. Moreover, there is only little concern on natural preservation. This condition causes natural and social degradation that dangers the ability of the next generation in fulfilling their needs. Most of related departments and agencies more emphasize on the implementation of non-sustainable agriculture development programs.

This condition is compounded by the implementation of programs that do not lead to empowerment in order to develop human resources quality of the farmers so that they become more independent. The Local Government of Malang Regency through its related departments and agencies provides only little education and training programs, otherwise, this local government gives a lot of grants to the farmers. The lack of programs leading to the empowerment of the farmers increases the potential of dependency of the farmers toward local



governments, and also they do not understand the importance of sustainable agriculture practice for their life and their next generation's life.

Agriculture development in Malang Regency is not sustainable and also do not empower the farmer community although these have been support by many legal frameworks. The practice of sustainable agriculture development in this regency as the implementation of sustainable development in agriculture sector has been supported by many clear legal frameworks, such as Regent Regulation Number 7 of 2010 concerning Control of Pollution and Environmental Damage, and also Local Regulation of Malang Regency Number 6 of 2008 concerning Long-Term Development Planning 2005-2025 which requires to implement sustainable development in all development sector, including agriculture sector.

However, all related departments and agencies still face some obstacles in implementing sustainable agriculture development in this regency which comes from all related departments and agencies, and also from farmers themselves, such as lack of commitment of the related departments and agencies, lack of coordination among all related departments and agencies, and also low-human resources quality of the farmers.

6.2. RECOMENDATION

From the conclusions that have been derived above, there are some suggestions which can be proposed and used for the consideration. Those suggestions are as follow:



1. Local Government of Malang Regency should be more creative in developing agriculture sector in order to promote sustainable agriculture in this regency, with the consideration that this regency implements decentralization system where every local government has more authority to create and conduct development program by using their own resources effectively and efficiently. So that the local government can create agriculture development program that can answer the farmer's problems.
2. All related departments and agencies should be increase the intensity of meeting among related departments and agencies with the farmers to socialize the government's agriculture development programs, including the procedure to get the assistance and grants from the government.
3. Increase the coordination and integration among related local governmental working units and shorten the coordination procedure to be more effective and efficient. This is important to avoid overlapping in the implementation of agriculture development programs and also to avoid a confusion in creating and implementing sustainable agriculture development programs that caused by the utilization of different technical measurement for the same objects.
4. Local Government of Malang District should implement an incentive system based on the performance of the employees of all related departments and agencies in implementing sustainable development programs, so that they have strong commitment and responsibility toward the success of those programs implementation.



5. All related local governmental working units should create and implement more empowerment programs in order to increase human resource quality of farmer community so they can be more independent and creative in creating cooperation with other stakeholders in order to develop sustainable agriculture in this regency which finally can reduce the dependency of the farmers toward local government and also other stakeholders.



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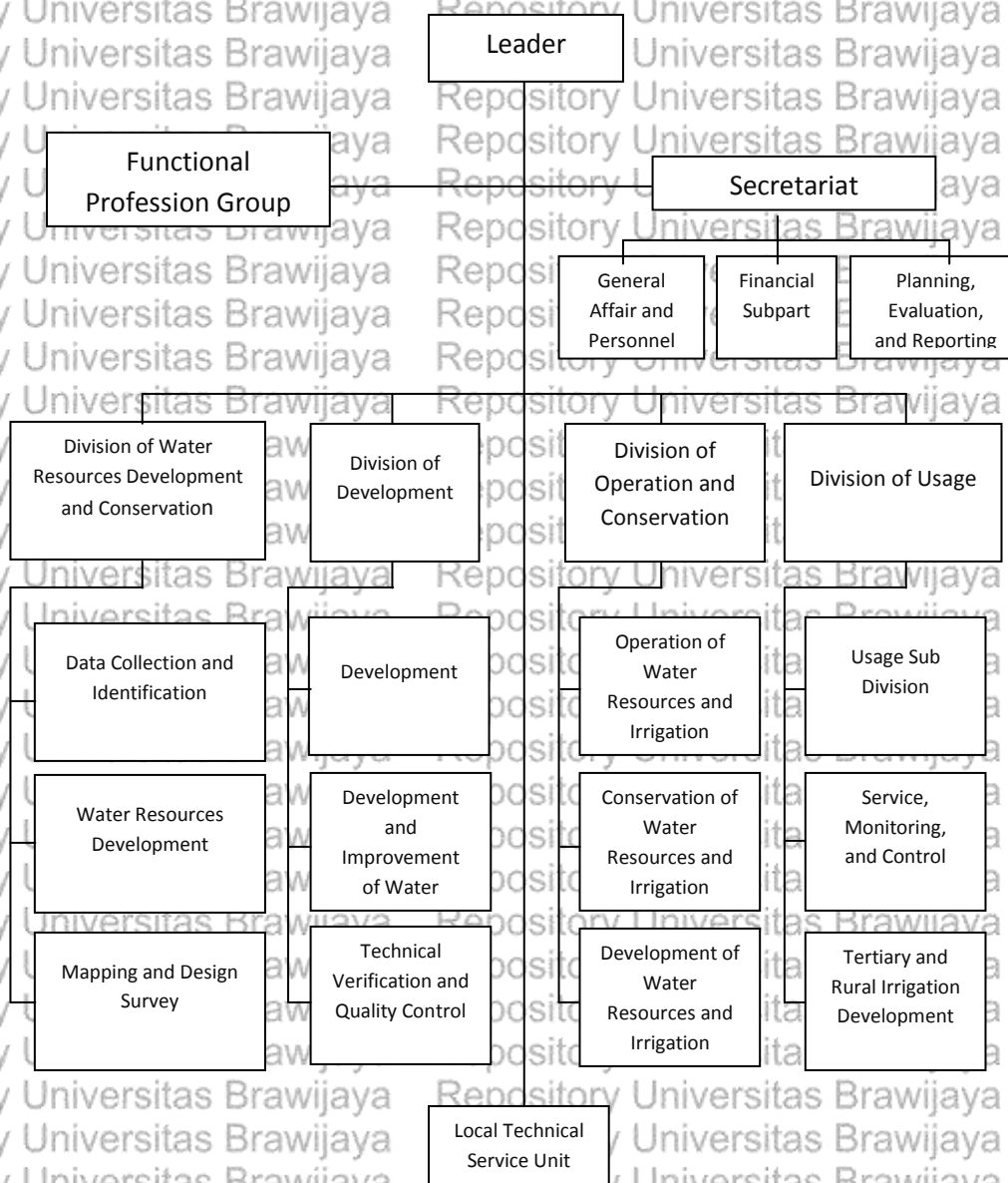
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Appendix 1

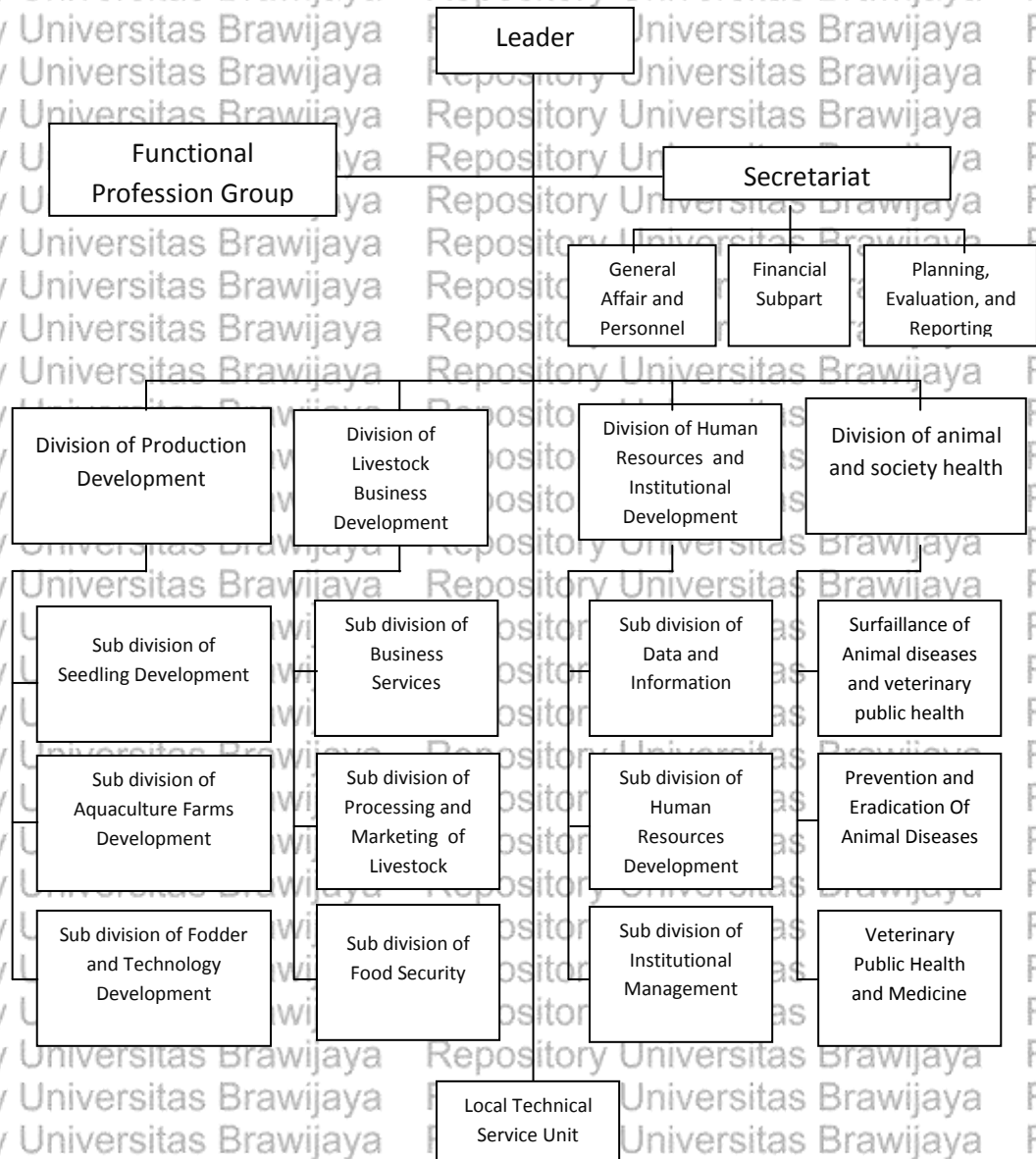
Organizational Structure of Department of Irrigation



Source: Department of Irrigation of Malang Regency, 2011:4

Appendix 2

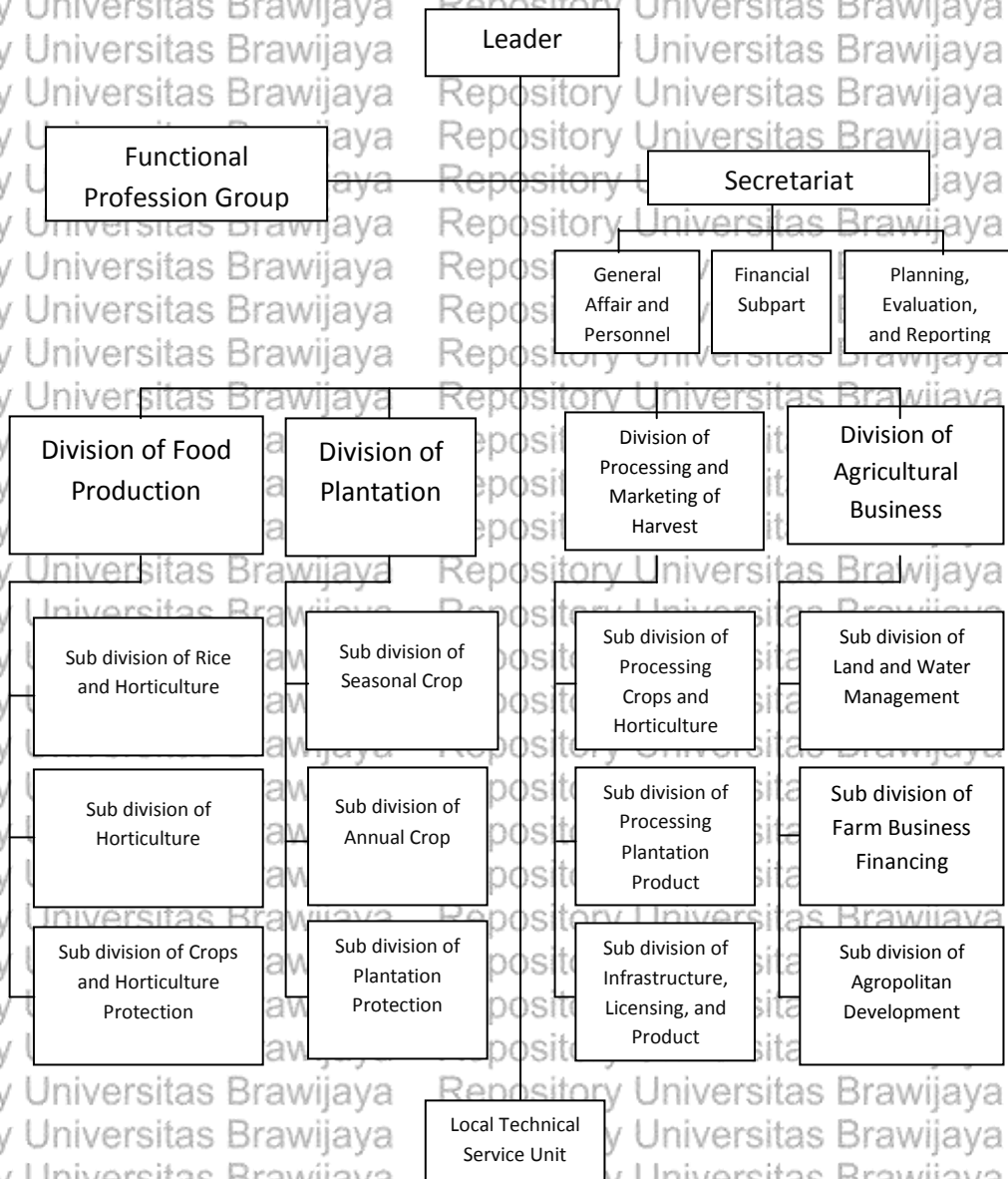
Organizational Structure of Department of Animal Husbandry and Animal Health



Source: Regional Development Planning Agency of Malang Regency, 2011:6

Appendix 3

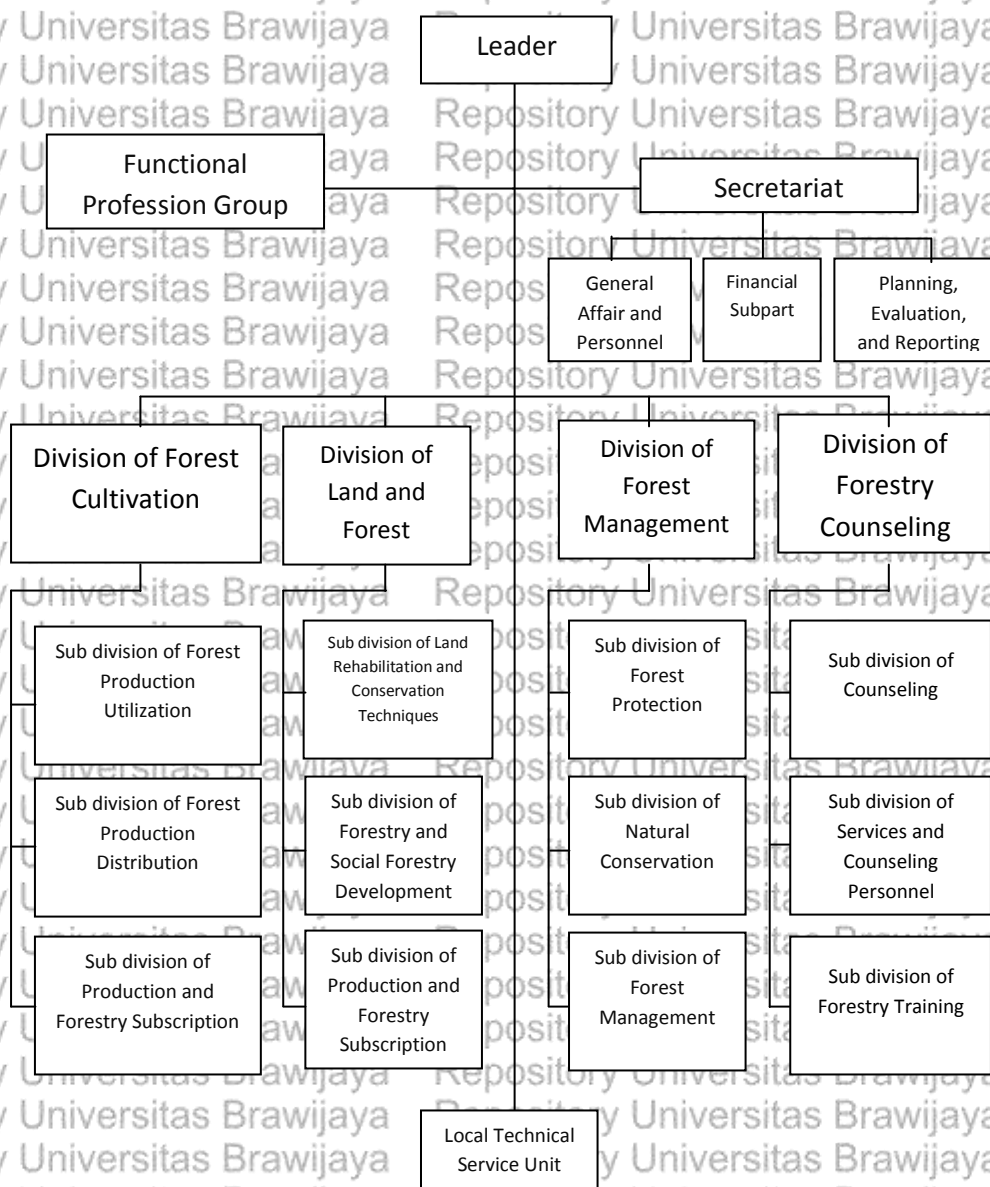
Organizational Structure of Department of Agriculture and Plantation



Source: Department of Agriculture and Plantation, 2011:9

Appendix 4

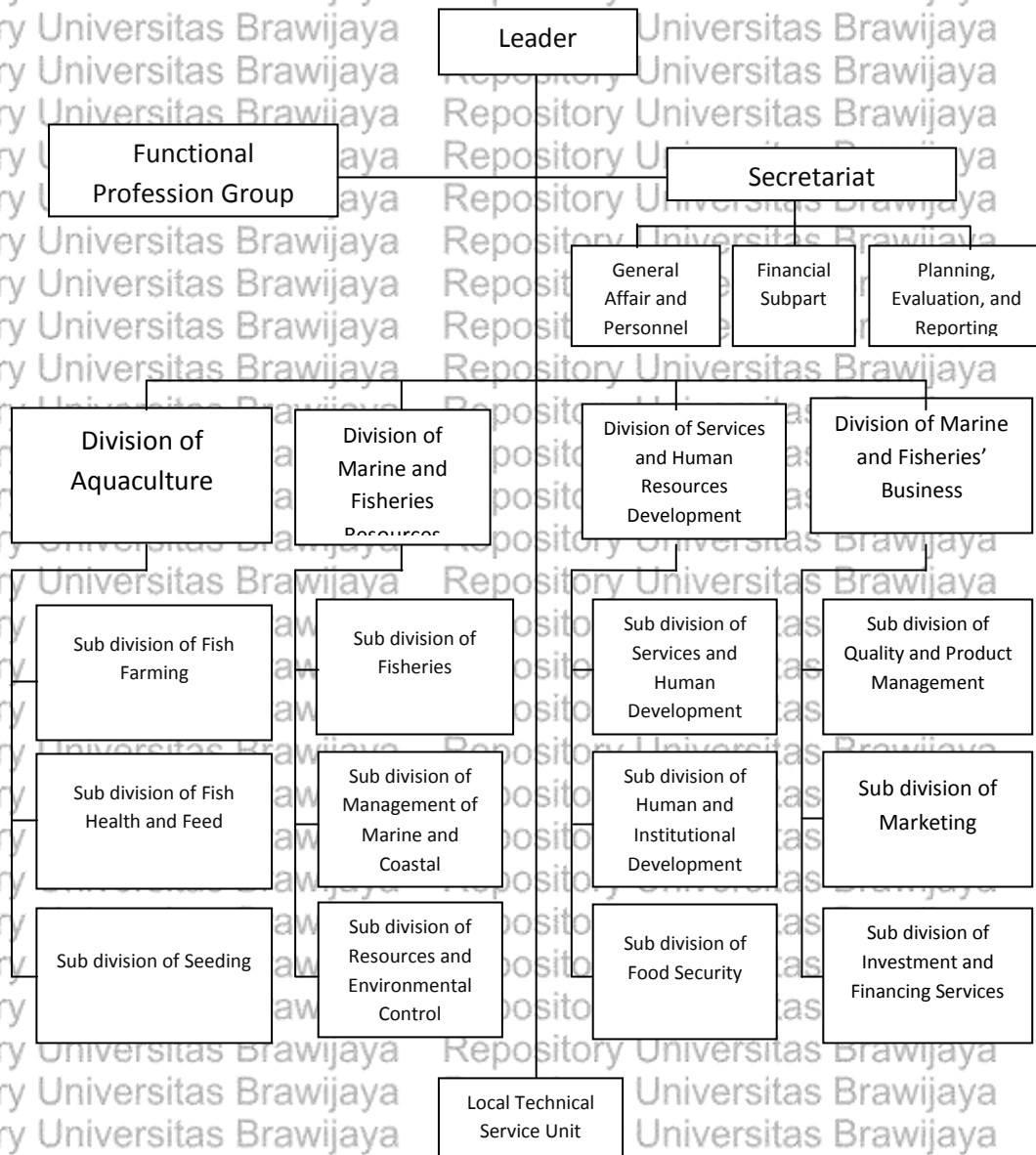
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Source: Department of Forestry of Malang Regency, 2011:9

Appendix 5

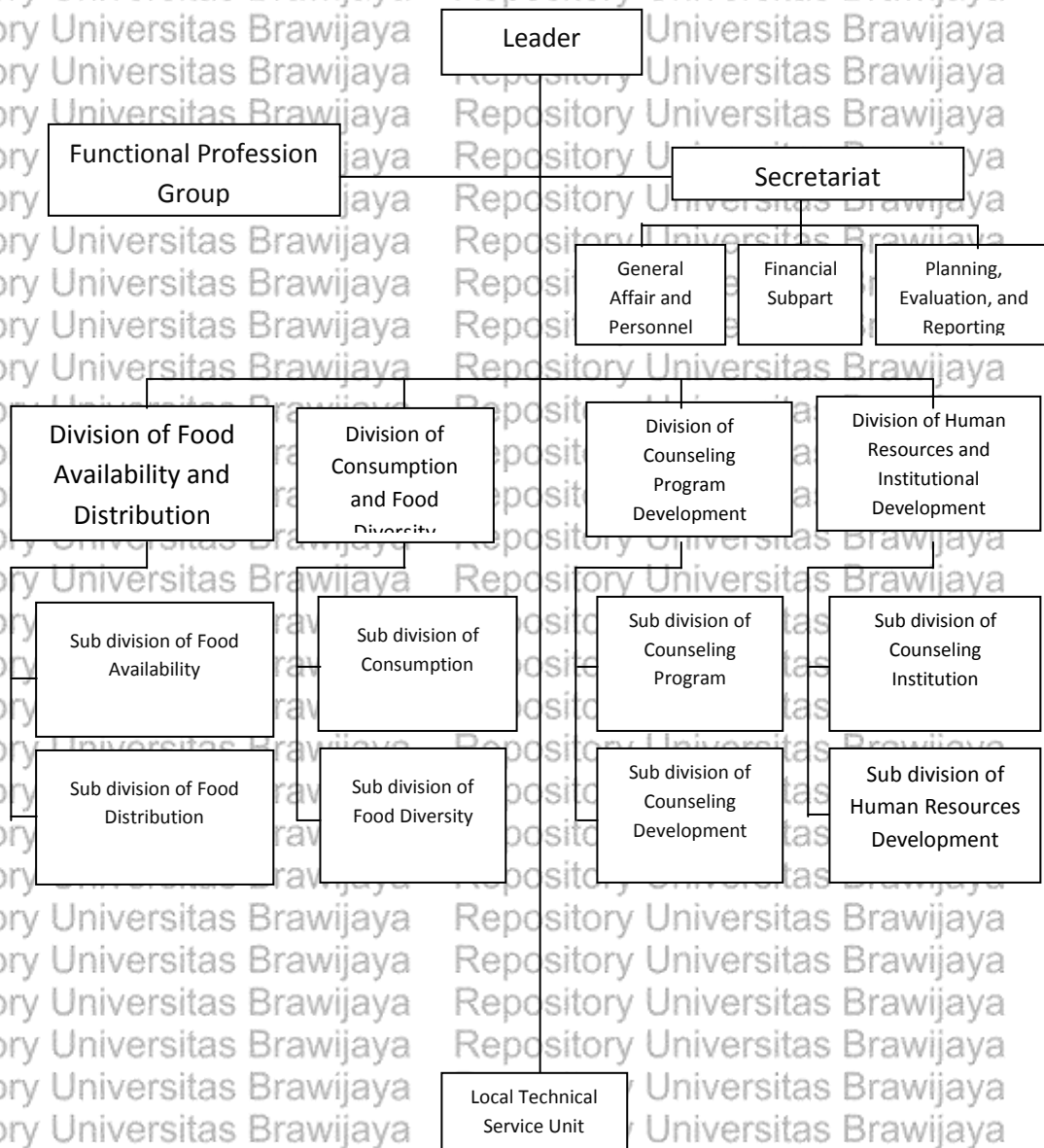
Organizational Structure of the Department of Marine and Fisheries



Source: Department of Marine and Fisheries of Malang Regency, 2011:12

Appendix 6

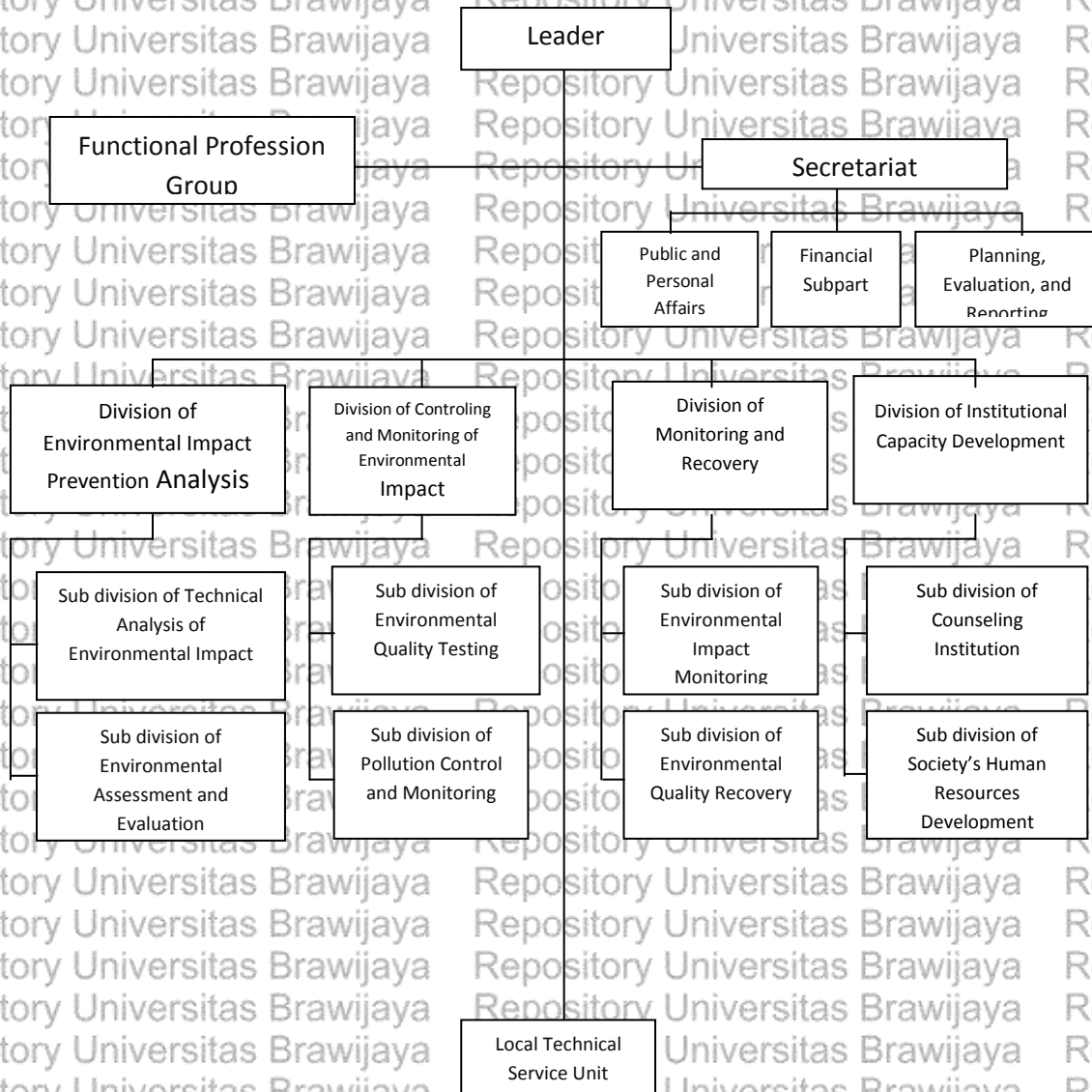
Organizational Structure of the Food Security and Counseling Implementer Agency



Source: Food Security and Counseling Implementer Agency of Malang Regency, 2011:4

Appendix 7

Organizational Structure of Environment Agency



Source: Environment Agency of Malang Regency, 2011:14

