Space Planning Oriented Toward the Realization of Sustainable Food Agriculture Land in Banyumas Regency

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ABSTRACT--Indonesia is one of the countries that opposes agriculture. This is characterized by agriculture as one of the sectors that form the economic base of a nation. One problem that also arises due to the weak umbrella act of agrarian reform is the rampant conversion of agricultural land to housing. It is undeniable that housing is a vital need that cannot be underestimated. But without proper regulation, in time it would only add to the problems in the national agrarian field. In implementing the transfer of function of agricultural land, the Banyumas Regional Government should follow the Banyumas Regional Regulation No. 10 of 2011 concerning Regional Spatial Planning. Land that has been designated as agricultural land is prohibited from being converted except in the context of land acquisition for public purposes and natural disasters.

Keywords: space planning, sustainable food, sustainable agriculture

I. INTRODUCTION

Related to being trusted, Indonesia is one of the countries that opposes agriculture. This is characterized by agriculture as one of the sectors that form the economic base of a nation. Can be understood from the empirical reality which shows that most of the Indonesian population have a livelihood in agriculture, both as farmers who own land and farmers who do not own land or farm laborers [1].

The term land has a very broad meaning, for this reason its limitations are needed. According to Article 4 Paragraph (1) of the Basic Agrarian Law Number 5 of 1960, the official restrictions on land are as follows:

"On the basis of the state’s right to control as referred to in Article 2, there are various kinds of rights to the surface of the earth, which are called land that can be given to and owned by people, both individually and together with other people and legal entities.”.

Based on Article 4 paragraph (1) above, what is meant by land is the surface of the earth. While land rights are rights to a certain part of the earth’s surface that is bounded, two-dimensional with length and width.[2]

Understanding of land besides found in the LoGA can also be seen in the Big Indonesian Dictionary (1994),[3] that what is meant by land is:

1. The surface of the earth or the layers of the earth that are above;
2. The state of the earth somewhere;
3. The surface of the earth which is given a boundary;
4. Materials from earth, earth as material (sand, rock, marl, etc.).

The population of Indonesia, which has reached 255461.70 people until the last data collection, (Source of the 2015 BPS Report), and according to data from the Central Statistics Agency (BPS), shows that the poverty experienced by the Indonesian population is mostly in rural areas which are generally farmers. This is mainly due to the large number of people who do not own land and weak community access to economic and political resources, including those that are primarily land.

Domestic food production is a key element in strengthening food security and rural development. Efforts in that direction will become strategic in the future. In the context of land, efforts to increase production can be achieved through two things, namely: guarantee of availability of agricultural land (land availability) and increased access of farming communities to agricultural land (land accessibility).[4]

Besides being used as a place to grow crops, land has a vital role for humans. We all know that land cannot be separated from humans because land is an important factor in human life. Land is a place of settlement, a place for human activities, even after death it still requires land.[5]

Regarding the availability of access to land to date is still an important issue in Indonesia, which is characterized by an imbalance in the allocation of tenure, use and utilization of land between sectors, especially between agriculture and non-agricultural sectors, which has an impact on depreciation of agricultural land, especially agricultural land for food crops. This is directly a threat to food security which has an impact on political shocks in the future. At present, Indonesia is still one of the countries that must import agricultural products to meet domestic needs. In addition, given the majority of Indonesian people are farmers, the depreciation of the land will have an impact on the mass unemployment of agricultural workers.

The influence of the availability and access of land for agriculture affects the economic and political stability of a country. As stated by Tri Pranadjji that the mastery of institutional trade in agricultural products is an important condition for the economic progress of agrarian societies,
an indicator of who has power in politics is who can control the trading system of agricultural products, especially to supply global / European market needs.[6]

In the midst of an economic crisis that affected almost all lines, the agricultural sector actually gave a glimmer of hope. However, when support to strengthen the position of authority or ownership of agricultural land is needed, policies regarding agricultural land are apparently inadequate. The negative impact of this very one-sided growth policy can be seen in the increasingly pressing rights of farmers. This is indicated by the shrinking agricultural land area due to population growth and conversion of agricultural land.[7]

The problem mentioned above becomes a contradictory matter, where on one hand Indonesia is a country that has an agricultural economic base, as well as the livelihood of most of the population is in the agricultural sector. However, the reality shows that most Indonesian farmers are landless farmers claim yourself. Even if you own land only own or control land that is so narrow that it cannot meet the needs of a decent living.

One problem that also arises due to the weak legal umbrella of agrarian reform is the rampant conversion of agricultural land to housing. It is undeniable that housing is a vital need that cannot be underestimated. But without proper regulation, in time it would only add to the problems in the national agrarian field.

Space in the territory of the Unitary Republic of Indonesia (NKRI), both as a unitary entity that includes land space, sea space, and air space, including space in the earth, as well as resources, is a gift from God Almighty to the Indonesian people who need thankful for, protected, and sustainably managed for the greatest prosperity of the people in accordance with the mandate contained in Article 33 paragraph (3) of the 1945 Constitution of the Republic of Indonesia, as well as the meaning contained in the philosophy and basis of the Pancasila state. To realize the mandate of Article 33 paragraph (3) of the 1945 Constitution of the Republic of Indonesia, as well as the meaning contained in the philosophy and basis of the Pancasila state.

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The problem examined in this article is whether the use of land in Indonesia shows what is on the ground, both as a result of deliberate activities by humans and formed by nature. This understanding in English is called land cover. Land use (in Indonesian) or land cover in English includes 2 meanings, namely land use and not used. This means that the term land use is not a direct translation of land use because land use is land use that is really intentional or desired by humans, for example vacant land, reeds, abandoned land, degraded land and so on, which in our term includes the type - types of land use.

According to I Made Sandy, at the beginning of human history began to be cultured, namely by clearing forests to be used as agricultural land, starting at an altitude of about 25 meters above sea level. The easiest form of farming is shifting cultivation, which is to clear the forest and then plant a seasonal crop a few seasons and then move to another area after the soil is infertile. The abandoned area is left to be forest again and someday it will be reopened. The 25 m height was chosen because of the availability of sufficient water for daily life and for agriculture, and the area is usually flat but not easily flooded and not flooded. While areas with elevations below 10 m above sea level are still swampy and covered with swamp forest.

Finally, there is a pattern of land use where in high areas there is cultivation, bushes and shrubs and degraded land surrounding the remaining dense forest. The area with the most intensive use is at an altitude of about 25-100 m above sea level (asl) in the form of villages with irrigated rice fields, gardens, fields, and rainfed rice fields in the vicinity. Furthermore, in the downstream area there is damaged soil because it is often flooded in the rainy season and exposed to salt water in the dry season.

In its development in the current modern era, data inventory is needed which includes the collection of data
and maps of current land use, spatial planning, and patterns of land tenure, as well as other land data. The data and maps collected are strived for accuracy on the same scale. For example, if the plan to be evaluated is at the level of RT RW with map scale 1: 50,000, then the classification of the type of land use now prepared should be at the same level as the type of RTRW allotment and with the same scale.

Since January 1, 2013, the rules on land acquisition for the needs of Government Agencies are ensured by the enactment of Law no. 2 years, 2012 concerning Land Procurement for Development in the Public Interest. The definition of government agencies includes state institutions, ministries, non-ministerial government agencies (agencies), provincial governments, district / city governments, and SOEs. While the meaning of public interest is the interest of the nation, state and society that must be realized by the government that is used as much as possible for the prosperity of the people. There are 18 Development Activities included in the development category for public interest, namely:

- a. Hamkamnas
- b. Public Roads (including toll roads), tunnels, railways & tools
- c. Drinking Water, Drainage & Sanitation Drains, Reservoirs, Dams, Irrigation & Other Waterworks
- d. Ports, Airports and Terminals
- e. Oil, gas and geothermal infrastructure
- f. Electricity generation and distribution infrastructure
- g. Government telecommunications and informatics networks
- h. Waste Disposal & Processing
- i. Government / Regional Government Hospital
- j. Public Safety Facilities such as flood control, lava & other disaster embankments
- k. Government / Local Government Cemeteries
- l. Public Health Facilities, Public Health Facilities & Green Open Space
- m. Nature Reserves and Cultural Reserves
- n. Government Offices, Local Government Offices, & Village Offices
- o. Urban Slum Settlement Arrangement, Land Consolidation, Flats for Low-Income Communities (MBR)
- p. Government/Local Government Education Infrastructure
- q. Government/Local Government Sports Infrastructure
- r. Public markets and public parking lots

According to Juniarso Ridwan 10 basic concepts of spatial planning law, contained in the opening of the 1945 Constitution paragraph 4 which reads:

"protect all the people of Indonesia and all Indonesian blood and to promote public welfare, educate the nation's life, and participate in carrying out world order …"

Furthermore, in Article 33 paragraph (3) of the 1945 Constitution the fourth amendment reads: "The earth and water and the natural resources contained therein are controlled by the state and used for the greatest prosperity of the people."

Furthermore, M. Daud Silalahi said that in order to be integrated in an environmentally sound decision process, several things needed to be considered, among others, as follows:[11]

1. Quantity and quality of sources of natural resources that are known and needed;
2. The consequences of taking natural resources, on land and at sea, including marine biological wealth, and depletion of deposits and stocks;
3. Alternative ways of extracting marine biological wealth and its effects on the state of the source of that wealth;
4. The presence or absence of substitute technology;
5. The possibility of developing substitute technologies including their respective costs;
6. There are other locations that are as good or better;
7. Water and air pollution levels, if any;
8. There is a place to make waste and dirt and to reprocess it as raw material; and
9. The effect of the project on the environment, the speed and nature of environmental degradation, the possibility of terminating the environmental degradation process and other alternative costs.

Land / land conversion or commonly referred to as land conversion is a change in the function of part or all of the land area from its original function (as planned) to other functions that have a negative impact on the environment and the potential of the land itself. Transfer of land functions can also be interpreted as changes to other uses due to factors that broadly include the need to meet the increasing needs of the population and increasing demands for a better quality of life.

Transfer of land functions are usually associated with the process of regional development, it can even be said that land conversion is a consequence of regional development. In fact, most of the land use changes that occur indicate an imbalance in land tenure which is more dominated by entrepreneurs who are allegedly modern capitalists by having building permits (IMB) issued by the government.12

Over the function of agricultural land in Indonesia, the numbers are indeed very astonishing. During 2000-2002, the area of conversion of paddy land intended for non-agricultural development, such as residential, industrial, office, road and other public facilities, averaged 110,160 hectares per year. This means, there are about 3000 hectares of rice fields per day which are converted to non-agricultural functions. The definition of housing and settlements themselves according to the provisions of Law Number 4 of 1992 concerning Housing and Settlements is as follows:

"Housing is a group of houses that functions as a residential or residential environment that is equipped with environmental infrastructure and facilities".
"Settlement is part of the environment outside the protected area, both in the form of urban and rural areas that function as a residential or residential environment and a place of activity that supports life and livelihood".

In line with the increasing population growth in Indonesia, the need for housing will also increase. The population in urban areas in Indonesia in 1985 was only 32% of the Indonesian population. In 2005 it increased to 48%, and 60% settled in Java. To meet the increasing needs of homes, always use agricultural land and productive land. In the last five years, nationally, the average conversion of agricultural land for housing development has reached 8,000 hectares (ha) per year, with a tendency to increase every year.[13]

The rise of the phenomenon of conversion of agricultural land should be a concern of all parties. As an illustration, the latest data from the Directorate General of Land and Water Management, Ministry of Agriculture (Director General of PLA, 2005) shows that around 187,720 hectares of rice fields are shifting to other uses each year, mainly on Java. Even more alarming, data from the Directorate of Land Stewardship of the National Land Agency (Winoto, 2007) illustrate that if the current Regional Spatial Planning (RTRW) directives are not reviewed, then from the total irrigated paddy land (7.3 million hectares), only around 4.2 million hectares (57.6%) can be retained. The rest, which is around 3.01 million hectares (42.4%) is threatened to switch functions to other uses.

Some areas of Central Java Province which are rice-producing centers include Cilacap Regency, Demak, Grobogan, Brebes, Pati, Sragen, Banyumas, Kebumen, Pemalang, Klaten, and Blora and several other regency / city areas that are not rice-producing centers but areas producing rice, there are still many districts / cities in Central Java Province that still rely on agricultural land. The contribution of the agricultural sector in Central Java Province is still dominant towards the Gross Regional Domestic Product (GRDP) so that the Central Java Province which is a major contributor to national food needs to guarantee the provision of sustainable agricultural land for food because the existence of agricultural land is an important means for the agricultural sector to provide food, especially rice, but currently economic development that has begun to focus on the non-agricultural sector such as investment in the industrial sector, infrastructure, hotels, restaurants and other buildings makes agricultural land narrower with such development, naturally requiring wider land resources, resulting in an increase in land requirements for development in various sectors.[14]

Actually, various policies relating to the problem of controlling the function of paddy fields have been made. However, until now the implementation has not been realized optimally. This is partly due to the lack of data support and the lack of adequate proactive attitudes toward controlling the function of the paddy fields. Related to that, Nasiotien stated that there were at least three fundamental obstacles which became the reason why the regulation of land use control was difficult to implement, namely:

First, Policy Coordination Constraints. On the one hand the government is trying to prohibit land conversion, but on the other hand it actually encourages land conversion through the policies of industrial / manufacturing growth and other non-agricultural sectors which in reality use agricultural land.

Second, Constraints on Policy Implementation. The new land use control regulations state the provisions imposed on companies or legal entities that will use the land and / or will convert agricultural land to non-agriculture. Therefore, changes in land use to non-agricultural land carried out individually / individually have not been touched by these regulations, where changes in land carried out individually are expected to be very extensive.

Third, Planning Consistency Constraints. The RTRW, which is then continued with the mechanism for granting location permits, is the main instrument in control to prevent the conversion of technical irrigated paddy fields. But in reality, many RTRWs actually plan to convert the technically irrigated paddy land into non-agriculture.

In connection with the three obstacles above, the ineffectiveness of existing regulations is also influenced by: (1) weak land administration systems; (2) lack of coordination between related institutions; and (3) the community mechanism for implementing spatial planning is not yet well-known. In addition, government perceptions of losses due to shifting land use tend to be biased downward (under estimate), so that the negative impact of land use change is less considered an issue that needs to be addressed seriously and consistently.

Furthermore, in line with Nasiotien, Simatupang and Irawan concluded that from several laws and regulations over the function of existing agricultural land has various weaknesses. These weaknesses include:

1. Objects of agricultural land that are protected from the process of transfer of functions are determined based on the physical condition of the land, even though the physical condition of the land is relatively easy to be engineered, so that land use can be carried out without violating applicable regulations.

2. Existing regulations tend to be appealing and do not have clear sanctions, both concerning the dimensions and the parties subject to sanctions.

3. If there is a change in the function of agricultural land that is not in accordance with applicable regulations, it is difficult to trace which party is most responsible, bearing in mind that the land conversion permit is a collective decision of various agencies.

4. The prevailing laws and regulations are sometimes paradoxical and dualistic in nature. On the one hand it intends to protect the conversion of paddy fields, but on the other hand the government tends to encourage the growth of industries which incidentally require land. In areas with limited dry land, such as the north coast of Java, this policy
will clearly suppress the existence of existing paddy fields.

Related to the conversion of agricultural land, the authors conducted a preliminary survey of the Thesis written by Endah Saptini, Student of the Sebelas Maret University (UNS) Surakarta Notary Program. The thesis entitled "Implementation of the Klaten Regency Government Policy in the Context of Protecting Sustainable Agricultural Land Based on Regional Regulation No. 11 of 2011 Regarding Spatial Planning for the Klaten Regency" obtained the results of a study which in principle is that efforts to prevent the conversion of agricultural land are very difficult to do by due to inhibiting factors.

The factors that become obstacles in the protection of sustainable agricultural land include: 1). The rules have not run as planned, 2). Law enforcement officials have not been running optimally 3). Not all of the people understand the applicable regulations and do not understand their agricultural land in the protected land zone.

The solution offered by Endah Saptini to control the conversion of agricultural land is a). Directing the development and development of the built area on land that is not a sustainable food agricultural land area, b). Establish areas of sustainable food agricultural land, c) Develop agricultural productivity, and d). Control the transfer of functions of sustainable agricultural land. In order to prevent the conversion of sustainable food agriculture land so as not to cause increasingly narrowing of agricultural land in Klaten District, Regional Regulation No. 11 of 2011 concerning the Spatial Planning of Klaten Regency has now been enacted in 2011-2020.15

In addition to the above thesis, the writer also studies Yogyakarta State University Journal. In a paper written by Julita Ratnika Wuri and Francisca Winarni entitled "Evaluation of Spatial Use Program in Agricultural Areas in Sleman Regency" in accordance with the evaluation model indicators according to Sulflebeam, the following research findings were obtained: 1. Context, in the use of space in Sleman Regency the aims and objectives are clearly set out in the Regional Regulation on Spatial Planning. What is the goal of the spatial use program has been adjusted to the vision and mission of the organization that prioritizes the interests and welfare of the community. Preparation of regional spatial plans (RTRW) as a result of spatial planning is used as a guideline in regulating spatial use in Sleman Regency. 2. Inputs, availability of resources including human resources, budgets, infrastructure and procedural rules can support the implementation of spatial use in Sleman Regency. In utilizing resources, the government is able to accommodate the use of space through cooperation that is carried out with intensive communication.

The process, in the implementation of spatial use has been carried out in accordance with existing procedures and rules. Utilization of space in agricultural areas is able to regulate land use in accordance with its designation through the instrument of implementing and controlling the use of space. Licensing instruments, and zoning regulations are carried out by the government consistently in accordance with the rules and continue to work to control and suppress the transfer of functions so as not to have an impact on the agricultural sector. 4. The product, in the use of spatial planning, the District Spatial Planning (RDTR) document has not yet been determined as a regional regulation, this is important because the regulation is the legal basis for implementing the spatial plan. The role of the community in the implementation of spatial use in agricultural areas can be seen with complaints from the community regarding building violations and the community who consulted the government before building.

Related to the conversion of agricultural land, in addition to the things stated above, there are two other strategic factors that have been left behind. First, there has not been much involvement of farmers as landowners and actors in local institutions actively in various efforts to control the conversion of agricultural land functions. Second, commitment has not been built, improvement of the coordination system, and development of competencies of formal institutions in handling the conversion of agricultural land functions. Finally, this condition causes the policy instrument for control of the conversion of agricultural land which has been prepared so far, cannot directly touch the critical nodes of empirical problems that occur in the field.

In the past, the private sector could utilize land acquisition institutions according to the procedures stipulated by Permendagri Number 1-5 of 1975 based on Permendagri Number 2 of 1976, then for business purposes based on Article 2 Paragraph (3) of Presidential Decree Number 55 of 1993 concerning Land Procurement For the Implementation of Development in the Public Interest, land acquisition must be carried out directly between the private sector and the holders of land and building rights and plants by way of sale, exchange, or other means on the basis of deliberation. One of the private parties referred to here is a housing development company.

Head of Land and Specific Land Stewardship Sub-Section at the Land Office, Darno said that almost 75 percent of the settlements or residential status or certificates are still in rice fields. The condition was said because the owner did not report on the conversion of the private land. He said that most of the status of paddy fields, but the physical condition had changed to change. He stated, almost every year the conversion of agricultural land functions into individual settlements of 10-15 hectares. Data that is owned by Suara Merdeka Daily, the Land Office has launched in 2010 that there were 55 hectares of paddy fields that were converted.

This is ironic if related to the facts compiled by Antara News Agency. In its search, data was obtained that the Banyumas Regency Government actually tightened the permit for the conversion of land functions in an effort to maintain the green open space that is the source of water in the region. Based on data compiled from the Department of Agriculture and Forestry (Dintanbunhut) Banyumas in Purwokerto, green open space in the Regency has reached 48 thousand hectares consisting of 28 thousand hectares of state forest and 20 thousand hectares of community forest. The area of green open space which reaches 48 thousand
hectares is equal to 35 percent of the Banyumas area which reaches 137 thousand hectares. Thus explained the Head of the Forestry Division Dintanbunhut Banyumas Maryono.

With the rapid increase in population growth, there is also a growing demand for land where agricultural land will be used to build housing. If this continues the productive agricultural land will be increasingly reduced. The rise of the conversion of agricultural land into housing is sometimes not monitored. Banyumas Regional Government's policy is allegedly lacking in favor of the agricultural sector, this can be seen by the increasing number of functions of agricultural land being converted into housing.

In implementing the transfer of function of agricultural land, the Banyumas Regional Government should follow the Banyumas Regional Regulation No. 10 of 2011 concerning Regional Spatial Planning. Land that has been designated as agricultural land is prohibited from being converted except in the context of land acquisition for public purposes and natural disasters. Land acquisition for public use must also be in accordance with the Banyumas Regency Spatial Planning. The use of agricultural land must be planned, because without a plan (planning) the agricultural land will depend on the interests of each individual. Some impacts of the conversion of agricultural land are as follows:

First, Reduced agricultural land. With the conversion of land to non-agriculture, automatically the agricultural land will be reduced. This of course has a negative impact on various fields, both directly and indirectly.

Second, Declining national food production. As a result of fewer agricultural land, the production results will also be disrupted. On a large scale, national food stability will also be difficult to achieve. Given the population that is increasing every year so that food needs also increase, but in reality agricultural land is actually decreasing.

Third, Threatens the balance of the ecosystem. With a variety of population diversity in it, rice fields or other agricultural lands are natural ecosystems for some animals. So that if the land undergoes a change in function, the animals will lose their homes and can interfere with the residents' settlements. In addition, the presence of agricultural land also makes rainwater well utilized thereby reducing the risk of causing flooding during the rainy season.

Fourth, Agricultural infrastructure becomes unused. To help increase agricultural products, the government has budgeted funds to build agricultural facilities and infrastructure. In the irrigation system for example, we will find many projects of various types of irrigation from the government, ranging from building dams, building drainage, and other infrastructure intended for agriculture. So that if the agricultural land is converted, the facilities and infrastructure will become obsolete.

Fifth, Many farm workers lose their jobs. Farm workers are people who do not have agricultural land but rather offer their labor to cultivate the land of others who need labor. So that if agricultural land changes function and becomes less and less, then the farm workers are threatened to lose their livelihoods.

Sixth, Food prices are increasingly expensive. When the production of agricultural products decreases, of course food ingredients on the market will be increasingly difficult to find. This of course will be used as well as possible for producers and traders to obtain large profits. So do not be surprised if then the food prices become expensive.

Seventh, High rates of urbanization. Most of the agricultural area is located in rural areas. So when there is a change of function of agricultural land which results in employment for some people closed, then what happens next is the rate of urbanization increases. People from the villages will flock to the city in hopes of getting more decent jobs. Though it could be that after arriving in the city their situation did not change because of increasingly fierce competition.

Returning to the problems mentioned above, due to the conversion of agricultural land will threaten the balance of the ecosystem. Rice fields or agricultural land is a natural ecosystem for some animals. If the land undergoes a change in function, the animals will lose their place of residence and can interfere with the residents' settlements. In addition, the presence of agricultural land also makes rainwater well utilized thereby reducing the risk of causing flooding during the rainy season. If the land changes function, then rainwater cannot be managed properly so that the risk of flooding cannot be anticipated. In other words, the conversion of agricultural land can have a negative impact on environmental sustainability. Related to the availability of food, it also poses a serious threat to sustainable food agricultural land.

III. CONCLUSION

1. Conclusion

First, the conversion of agricultural land functions will threaten the balance of the ecosystem. If the agricultural land changes its function, these animals will lose their homes and can interfere with the residents' settlements. Secondly, the existence of agricultural land also makes rainwater utilized properly, thereby reducing the risk of causing flooding during the rainy season.

2. Suggestion

Active participation from all components of society is needed in determining the policy on the conversion of land or agricultural land into housing. This is important because without active participation from the community as a controller, it can lead to policy products that are full of interests, for example political interests.
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