

Research on Changes in Agricultural Land Area in An Giang Province (2010 - 2015)

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ABSTRACT

This study focuses on changes in agricultural land area in An Giang Province from 2010 to 2015. The results indicate that factors such as urbanization, changes in economic structure, land policy, and climate change have significantly impacted the agricultural land area during this period. The study also provides recommendations for managing and using agricultural land effectively and sustainably. By flexibly applying government land policies, An Giang Province has been striving to adjust its agricultural land area. To date, changes in the province's agricultural land area remain a significant issue that requires further research. Therefore, the study on "Changes in Agricultural Land Area in An Giang Province from 2010 to 2015" is of high scientific and practical significance. The research aims to analyze changes in agricultural land area, compare it across different periods of increase and decrease, and identify patterns and development processes to enhance economic efficiency and address social issues in An Giang Province.

Keywords: fluctuations, agriculture, agricultural land, An Giang

1. Introduction

An Giang Province, located in the Mekong Delta region, is one of the provinces with a significant area of agricultural land and high agricultural production in Vietnam. With its favorable geographic location and rich natural conditions, An Giang has become one of the leading provinces in agricultural economic development, making a substantial contribution to the national economy. However, from 2010 to 2015, the province experienced considerable fluctuations in agricultural land area due to factors such as urbanization, changes in economic structure, land policy, and climate change. Systematic and scientific research on "Changes in

Agricultural Land Area in An Giang Province from 2010 to 2015" not only helps to better understand the province's development process but also identifies characteristics and causes affecting the agricultural land conversion process. This study analyzes the factors influencing changes in agricultural land area and provides recommendations for more effective management and use of agricultural land, ensuring sustainable development for An Giang Province. Additionally, the research aims to compare and contrast the province's agricultural land area over the years, explain the fluctuations in agricultural land area, and contribute to achieving sustainable agricultural economic efficiency in An Giang Province in the future.

2. Method

Firstly, analysis and synthesis methods are applied to examine documents related to the research issues.

Secondly, the historical method is used to describe the research problem over time, providing a clear view of the agricultural economic development of An Giang Province.

Thirdly, the study employs data collection and analysis methods using secondary sources, including statistical reports, research documents, and relevant policies.

3. Results

3.1. Theoretical Basis

Agriculture

Agriculture encompasses crop production, livestock, aquaculture, fisheries, and forestry for both food and non-food products [Food and Agriculture Organization, 2021]. Agriculture is the primary sector producing basic material goods for society, providing crops and livestock products [Institute of Linguistics, 2006, p. 740]. It is a distinctive sector tied to crop cultivation and animal husbandry, influenced by biological laws and external conditions (such as land and weather/climate). Agriculture is essential for societal existence and development. Broadly, agriculture includes forestry and fisheries, while in a narrower sense, it refers to the production of material goods based on the growth laws of crops and livestock to create products such as food and meet human needs.

Agricultural Land

According to the current Vietnamese Land Law, agricultural land is designated for agricultural production needs, including land for crop production, forestry, aquaculture, salt production, and other agricultural purposes [Land Law, 2013].

Land Use Changes

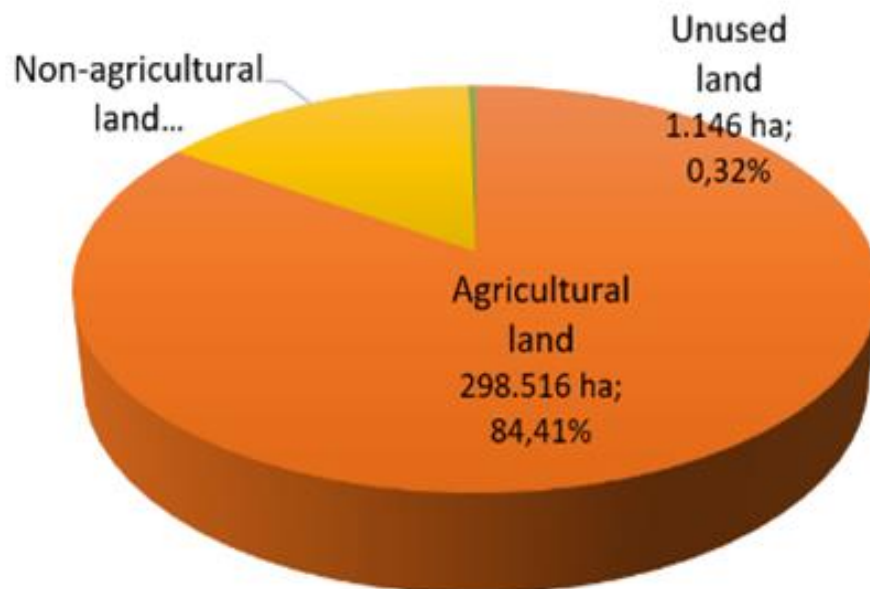
Land use changes refer to alterations in the natural state of land cover caused by human activities. This phenomenon is common and is associated with population growth, market development, technological innovations, and changes in institutional policies. Land use changes can have various impacts on natural resources, such as changes in vegetation, alterations in soil properties, shifts in animal and plant populations, and effects on climate-forming factors [Muller, 2004].

Therefore, fluctuations in agricultural land area represent unstable or variable changes in the amount of land used for agricultural activities over a specified period. These fluctuations may involve increases or decreases in agricultural land area due to various factors.

3.2. Current Status of Agricultural Land Use in An Giang Province

By 2015, the total natural area of An Giang Province was 353,668 hectares, including: agricultural land at 298,516 hectares, accounting for 84.41%; non-agricultural land at 54,006 hectares, making up 15.27%; and unused land at 1,146 hectares, representing 0.32% [People's Committee, 2016].

Chart 01: Land Use Structure in An Giang Province in 2015



(Source: Statistical Data on Land for the Years 2011 and 2015, An Giang Province)

Current Status of Agricultural Land Use in An Giang Province in 2015:

The total agricultural land area in An Giang Province was 298,516 hectares, accounting for 84.41% of the total natural area. This includes:

Rice paddy fields: 254,432 hectares; Land for annual crops: 11,691 hectares

Land for perennial crops: 16,590 hectares; Protection forests: 8,750 hectares Special-use forests: 884 hectares; Production forests: 2,002 hectares; Aquaculture land: 4,005 hectares [An Giang Statistics Office, 2016].

3.3. Fluctuations in Agricultural Land Area in An Giang Province (2010 – 2015)

In 2015, the total natural area of An Giang Province increased by 1.17 hectares compared to 2010. This increase was due to boundary adjustments between An Giang and neighboring provinces, such as Kiên Giang and Đồng Tháp.

The total agricultural land area in the province increased by 1,083 hectares compared to 2010 (297,433 hectares). This increase was due to the utilization of previously unused land and the redefinition of land types as per the guidelines in Circular 28/2014/TT-BTNMT dated June 2, 2014, by the Ministry of Natural Resources and Environment.

The area of rice paddy fields in 2015 was 254,432 hectares, a decrease of 3,221 hectares compared to 2010 (257,653 hectares), with an average annual decrease of 644 hectares. This decrease includes a reduction of 315 hectares in dedicated rice paddies, with an average annual decline of 63 hectares. The reduction in rice paddy area was attributed to the implementation of policies for crop structure transformation. Low-yield rice fields were converted to perennial crops, annual crops, and aquaculture land. Additionally, some rice paddy fields were converted to non-agricultural land to meet local economic and social development needs.

Although the area of rice paddy fields decreased, the area of land for other annual crops increased by 2,262 hectares compared to 2010 (9,429 hectares). This increase was due to the local policy in An Giang Province of transitioning from low-yield rice fields to other annual crops.

The area of land for perennial crops grew by 4,407 hectares compared to 2010 (12,183 hectares). This increase was primarily because perennial crop land was separated from residential land (previously, residential and perennial crop land were both categorized as residential land; now, residential land and perennial crop land are recorded separately). Additionally, the increase was due to the provincial policy of shifting from low-yield rice fields to perennial crops.

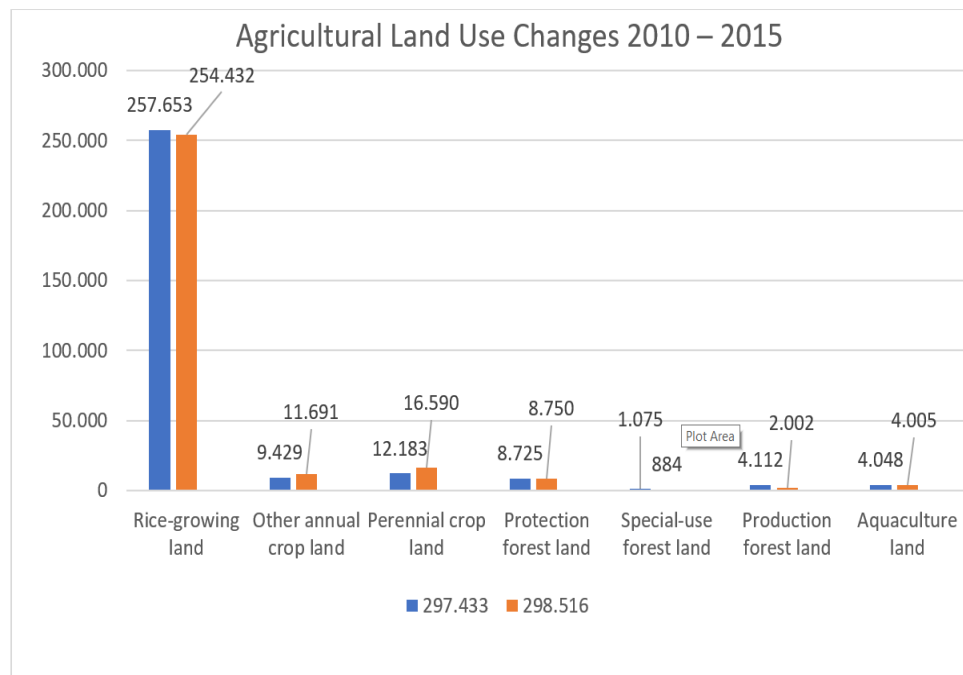
The area of protection forests increased by 25 hectares in 2015 compared to 2010 (8,725 hectares). This increase was mainly in Tri Tôn District, where land was converted from perennial crops, production forests, and special-use forests to protection forests.

Thus, during the period from 2010 to 2015, there were significant fluctuations in agricultural land use in An Giang Province. The area of land for perennial crops and other annual crops increased, while the areas for rice paddies and production forests decreased. These changes reflect adjustments in land use strategies to meet the local economic and social development needs and environmental protection goals, aiming for sustainable agricultural development in An Giang Province. [An giang, 2013].

Table 1: Fluctuations in Agricultural Land Use in An Giang Province from 2010 to 2015

Numerical order	Agricultural Land Use Changes 2010 – 2015	Year 2010		Year 2015		Increase (+), Decrease (-)
		Area (ha)	Structure (%)	Area (ha)	Structure (%)	
1	Total agricultural land area	297.433		298.516		1.083
1.1	Rice-growing land	257.653	86,63	254.432	85,23	-3.221
1.2	Other annual crop land	9.429	3,17	11.691	3,92	2.262
1.3	Perennial crop land	12.183	4,10	16.590	5,56	4.407
1.4	Protection forest land	8.725	2,93	8.750	2,93	25
1.5	Special-use forest land	1.075	0,36	884	0,30	-191
1.6	Production forest land	4.112	1,38	2.002	0,67	-2.110
1.7	Aquaculture land	4.048	1,36	4.005	1,34	-43

Source: Statistical Data on Land for the Years 2011 and 2015, An Giang Province



Source: Statistical Data on Land for the Years 2011 and 2015, An Giang Province

3.4. Causes of Fluctuations in Agricultural Land Area in An Giang Province

(2010 – 2015)

Policies and Regulations

Following the implementation of the 2013 Land Law, An Giang Province has placed significant emphasis on effective land management and adherence to legal regulations and implementing guidelines. During the period from 2010 to 2015, the province issued regulations on land management and use that were aligned with economic and social development needs and adaptation to climate change. These regulations had a considerable impact on fluctuations in agricultural land area in An Giang.

One of the causes for fluctuations in agricultural land area was the change in methods and criteria for land statistics and inventory as guided by Circular No. 28/2014/TT-BTNMT dated June 2, 2014, by the Ministry of Natural Resources and Environment. This change resulted in some land types previously classified under non-agricultural land being reclassified as agricultural land. Specifically, land for annual crops, perennial crops, and aquaculture, which were previously categorized under residential land, were reclassified, leading to an increase in the recorded area of these agricultural lands.

Additionally, the policy to develop high-tech agriculture as per Resolution No. 09-NQ/TU dated June 27, 2012, led to the conversion of 1,624 hectares of low-yield rice fields and approximately 585 hectares of annual crop land into fruit orchards with higher economic value. This policy aimed to increase farmers' incomes in the province.

Climate Change

An Giang is one of the provinces affected by climate change, facing issues such as land degradation, saltwater intrusion, and increased occurrences of drought and unusual flooding. Statistics indicate that approximately 1.82% of the province's area is at risk of flooding, with high tide exacerbating production impacts. Additionally, prolonged droughts have intensified saltwater intrusion, leading to water shortages for both domestic use and agricultural production. The decreased flow of the Mekong River has caused water shortages, while seasonal floods and droughts have led to irregular hydrological patterns, significantly impacting land conditions. As a result, some agricultural lands have had to shift production models to achieve economic benefits.

Urbanization

Agricultural land has been converted to non-agricultural uses to meet the demand for land needed for constructing infrastructure such as transportation, irrigation, and flood control embankments. This conversion also supports the upgrading of urban areas like Long Xuyên, Châu Đốc, Tân Châu, and Tịnh Biên; the establishment of healthcare facilities, educational institutions, cultural and sports facilities; the development of new rural areas and the creation of commercial-service zones; industrial clusters; and concentrated residential areas. These changes are aimed at accommodating the land needs of investors and ensuring housing for households and individuals.

The fluctuations in agricultural land area are driven by various factors, including economic policies; the process of changing land use from agricultural fields to urban, industrial, or residential areas, and vice versa, from residential or industrial zones to agricultural land; as well as natural factors such as climate change and varying agricultural practices.

4. Discussion and Conclusion

From 2010 to 2015, An Giang Province experienced significant changes in agricultural land use. The increase in the area of perennial crops and other annual crops, alongside the decrease in rice paddy area, indicates a trend toward crop structure transformation to meet local economic and social development needs. The substantial reduction in rice cultivation suggests that farmers are seeking more economically viable alternatives. This shift from rice fields to other crops reflects both changing market demands and part of the province's sustainable development strategy.

Despite the overall increase in agricultural land area, the conversion to non-agricultural purposes, such as infrastructure and industrial development, poses a major challenge for protecting and expanding agricultural land in the future. This situation calls for the government and relevant agencies to implement reasonable policies to balance economic development with land resource protection.

In summary, the fluctuations in agricultural land use in An Giang reflect not only changes in agricultural production strategies but also economic and social development indicators for the province. Effective management and use of agricultural land will be crucial for sustainable development in the future.

Key recommendations include:

- **Implementing Projects and Plans:** Development projects and land use plans should meet investment needs while adhering to environmental protection and sustainable development criteria. This will help prevent issues such as a shortage of arable land and migration of residents seeking agricultural opportunities elsewhere.
- **Maintaining Rice Cultivation Areas:** Large-scale rice-growing areas should be kept stable to ensure food security, with conversion only in regions with low yields and inefficiency.
- **Allocating Land for Various Uses:** Adequate land should be allocated for business operations, commercial services, and large-scale agricultural production.
- **Adapting Land Use Structure:** Land use adjustments should align with An Giang's characteristics, maintaining strengths in food production and aquaculture while ensuring environmental protection and adaptation to climate change.
- **Streamlining Administrative Procedures:** Efficient administrative processes are necessary to attract both local and foreign investors, facilitating investments in agriculture, forestry, aquaculture, industry, tourism, and services. This will help create jobs, increase local budget revenues, and enhance land use efficiency.

To ensure sustainable development, it is crucial to manage and use agricultural land wisely. Increasing community and local government awareness about the importance of agricultural land is also essential in this process. Economic development must be closely tied with social development, infrastructure, and public welfare to support production and effective land resource utilization. Adjusting land use planning to align with economic and social development goals

will help harness land advantages and promote deep and diversified growth in agriculture, forestry, and aquaculture, with a focus on quality investment.

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