

## Assessment of the results of implementating the annual land use plan of An Thi district (former), Hung Yen province for the period 2021 - 2024

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### Đánh giá kết quả thực hiện kế hoạch sử dụng đất hằng năm huyện Ân Thi (cũ), tỉnh Hưng Yên giai đoạn 2021 - 2024

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#### ABSTRACT

This study aims to assess the results and propose solutions for the effective implementation of annual land use plans (LUPs) in An Thi district, Hung Yen province. Methods involved primary and secondary data collection, a 5-point Likert scale assessment using land use indicators, and surveys of government officials and public employees. The results indicate that 50 indicators were implemented at a very good level (accounting for 52.08% of the total assessed), while 19 indicators (19.79%) were assessed as very poor. The survey of government officials and public employees showed that one out of eight criteria (Attention and support of authorities at all levels to annual LUPs) was rated as very good, five were as good (including coordination of stakeholders, public disclosure, compatibility of the LUP Coordination in directing LUP implementation, and results of LUP implementation), and two out of eight as average (Management and Progress of LUP implementation). To enhance the effectiveness of LUP implementation, the study proposes a set of synchronized solutions, including: improving the formulation and implementation of annual LUPs; mobilizing necessary resources; accelerating the application of science, technology, and innovation; and establishing a reserve land fund.

#### TÓM TẮT

Nghiên cứu nhằm đánh giá kết quả và đề xuất giải pháp thực hiện hiệu quả kế hoạch sử dụng đất (KHSDĐ) hằng năm tại huyện Ân Thi, tỉnh Hưng Yên. Sử dụng các phương pháp: điều tra sơ cấp, thứ cấp, thang đo 5 cấp của Likert, đánh giá theo chỉ tiêu sử dụng đất (SDĐ) và kết quả điều tra cán bộ công chức. Kết quả cho thấy có 50 chỉ tiêu đạt mức thực hiện rất tốt (chiếm 52,08% so với kế hoạch), 19 chỉ tiêu SDĐ (chiếm 19,79%) thực hiện rất kém. Kết quả điều tra cán bộ, công chức, viên chức cho thấy có 1/8 tiêu chí (Sự quan tâm và hỗ trợ của các cấp chính quyền đối với kế hoạch sử dụng đất) được đánh giá ở mức rất tốt và 5/8 tiêu chí ở mức tốt (Sự phối hợp của các bên liên quan; Công khai KHSDĐ; Tính phù hợp của KHSDĐ với phát triển tại địa phương; Sự phối hợp trong chỉ đạo thực hiện KHSDĐ và Kết quả thực hiện KHSDĐ); 2/8 tiêu chí ở mức trung bình (Quản lý việc thực hiện KHSDĐ; Tiến độ thực hiện KHSDĐ). Để nâng cao hiệu quả thực hiện KHSDĐ cần thực hiện đồng bộ các giải pháp sau: nâng cao hiệu quả lập và thực hiện KHSDĐ hằng năm; huy động nguồn lực cần thiết; tăng cường ứng dụng khoa học kỹ thuật và công nghệ; tạo lập quỹ đất dự phòng.

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## 1. INTRODUCTION

The formulation, adjustment, and management of land use planning and annual land use plans (LUPs) constitute one of the core elements of state land management. The LUP serves as the temporal breakdown of land use planning for implementation [1], and provides the legal basis for land allocation, land leasing, approval of land use conversion, and issuance of land use right certificates [1, 2]. It is also the foundation for implementing the restructuring of land use in alignment with labor, investment, and socio-economic restructuring [3]. In the context of accelerating urbanization and industrialization, land use demands have become increasingly diverse and complex, presenting major challenges in planning, scheduling, and coordinating land use. District-level People's Committees are responsible for preparing annual district LUPs [2, 4], which must be approved before December 31 each year [4, 5].

An Thi district (as of July 1, 2025, reorganized into five communes: An Thi, Xuan Truc, Pham Ngu Lao, Nguyen Trai, and Hong Quang) is located in the eastern part of Hung Yen province. It is traversed by major transportation routes and situated near key urban centers such as Hanoi and Hai Phong, giving it strong potential to develop into one of the industrial hubs of the regional belt and the northern economic corridor. An Thi is undergoing rapid industrialization and urbanization, attracting strategic projects at both provincial and national levels. The district's annual LUP, prepared in accordance with regulations, serves as a critical legal basis for approving land use conversion and implementing investment projects. However, to date, no comprehensive studies have been conducted to evaluate the outcomes of its implementation. This study, therefore, aims to assess the results and propose solutions for the effective implementation of the annual LUPs in An Thi district during the period 2021–2024.

## 2. RESEARCH METHODS

### 2.1. Data and document collection methods

Secondary data and documents were collected from provincial departments and agencies of Hung Yen province, as well as from district-level offices and previously published studies. Primary data were collected through field surveys and interviews with 30 officials and public employees directly involved in the implementation of annual land use plans (LUPs) in the study area.

### 2.2. Data processing methods

The collected data were grouped, statistically processed, and analyzed using Excel and SPSS, categorized by land use indicators and by year. The results of LUP implementation were evaluated by comparing the actual outcomes with the approved LUPs. The specific criteria were as follows:

(i) **Based on land use indicators:** Evaluation was conducted according to area (ha) and implementation rate (%). The percentage rate was divided into evaluation levels based on the deviation value  $d$  ( $d = |\text{actual result} - \text{plan}| / \text{plan} \times 100\%$ ), including: Very good: 5 points if  $|d| < 10\%$ ; Good: 4 points if  $|d| = 10\% - 20\%$ ; Average: 3 points if  $|d| = 20.01\% - 30\%$ ; Poor: 2 points if  $|d| = 30.01\% - 40\%$ ; Very poor: 1 point if  $|d| > 40\%$  [3, 6, 7].

(ii) **Based on primary survey results:** Eight evaluation criteria were applied: (1) attention of authorities at different levels; (2) coordination among stakeholders; (3) disclosure of the LUP; (4) consistency of the LUP with local development; (5) coordination in implementation; (6) management of LUP execution; (7) progress of implementation; and (8) outcomes of implementation. The Likert scale was used [8, 9] with five levels ranging from very high/very good (level 5) to very low/very poor (level 1). The overall evaluation was calculated as a weighted mean, with the following classification: Very good:  $\geq 4.20$  points; Good:  $3.40 - < 4.20$  points; Average:  $2.60 - < 3.40$  points; Poor:  $1.80 - < 2.60$  points; Very poor:  $< 1.80$  points.

## 3. RESULTS AND DISCUSSION

### 3.1. Characteristics of the study area

An Thi district is centrally located with

convenient transportation, lying within the Northern Economic Corridor and near major centers such as Hanoi, Hai Duong, and Thai Binh. This provides favorable conditions for industrial, service, and urban development, while also enhancing the district's ability to attract investment for efficient land use. The land resources are fertile, suitable for various crops and livestock, supporting sustainable agricultural development and diversification of agricultural products. In 2024, the average Gross Regional Domestic Product (GRDP) per capita reached 82 million VND, an increase of 1.7% compared to 2023; income value per hectare of cultivated land reached 215 million VND. State budget revenue amounted to 1.7 trillion VND, achieving 546.8% of the provincial target. The poverty rate decreased to 0.44%. Agricultural production met the planned targets, and new rural development programs were actively implemented in line with the plan. To date, the district has had 8 industrial zones approved by the Government for inclusion in Vietnam's industrial zone planning, and 7 industrial clusters established. Three industrial zones are already in operation, hosting 44 secondary investment projects with a total capital of 13,738 billion VND [10]. The development of technical infrastructure in the established industrial clusters has been carried out largely on schedule, in accordance with regulations.

### **3.2. Assess implementation of annual LUPs in An Thi District, period 2021–2024**

The LUPs of An Thi district were approved under the Decisions of the Hung Yen provincial People's Committee, specifically: Decision No. 1358/QĐ-UBND dated June 10, 2021 approving the 2021 LUP [11]; Decision No. 1219/QĐ-UBND dated June 6, 2022 approving the 2022 LUP [12]; Decision No. 1016/QĐ-UBND dated May 5, 2023 approving the 2023 LUP [13]; and Decision No. 645/QĐ-UBND dated March 27, 2024 approving the 2024 LUP [14]. Compared with the legal requirement of approval before December 31 each year, most of these

decisions were issued later than stipulated. This is also a common difficulty faced by many localities [3, 6, 7]. Such delays hinder the attraction of investment and the implementation and management of programs and projects based on the approved LUPs. The implementation results are as follows:

#### **3.2.1. By land use indicators**

The data in Tables 1, 2, 3, and 4 show the following: According to the implementation results of the 2021 LUP (Table 1), the district's natural land area decreased by 0.24 ha compared to the approved plan, due to errors in land inventory. Agricultural land showed a deviation of 1.42%, which is lower than the results reported in Nghi Loc district (1.52%) [6], but higher than those in Nho Quan district, Ninh Binh province (1.13%) [15]. The highest deviation was found in other agricultural land, at 271.09%, meaning 118.06 ha had not yet been converted according to the plan. Perennial cropland followed, with a deviation of 83.42%, corresponding to 415.96 ha not yet converted.

Non-agricultural land had a relatively high implementation rate of 97.15%, higher than the research findings in Nghi Loc district (96.14%) [6] and Nho Quan district (94.39%) [15]. However, several non-agricultural land use targets were not achieved at all, such as industrial zone land and land for construction materials and ceramics production. Some indicators showed very large deviations from the approved plan, including land for industrial clusters (78.57% deviation, with only 21.43% implemented) and community living land (82.58% deviation, with only 17.42% implemented). Notably, public recreational land emerged entirely outside of the planned allocation (100% deviation). The main reasons for these discrepancies were difficulties in land acquisition and inaccurate forecasting of land use demand compared with actual conditions. As for unused land, 5.02 ha were put into use, reaching 46.61% of the approved plan target.

**Table 1. Results of the Implementation of the 2021 Land Use Plan in An Thi district**

| No.      | Land Category                                          | Code       | Planned (ha) [11] | Implemented (ha) | Deviation (%) |
|----------|--------------------------------------------------------|------------|-------------------|------------------|---------------|
|          | <b>Total natural area</b>                              |            | <b>12,998.19</b>  | <b>12,997.95</b> | <b>0.002</b>  |
| 1        | Agricultural land                                      | NNP        | <b>8,788.20</b>   | <b>8,913.42</b>  | <b>1.42</b>   |
| 1.1      | Paddy rice land                                        | LUA        | 7,464.32          | 7,069.41         | -5.29         |
|          | of which: Specialized wet-rice land                    | LUC        | 7,464.32          | 7,069.41         | -5.9          |
| 1.2      | Other annual cropland                                  | HNK        | 157.02            | 92.86            | -40.86        |
| 1.3      | Perennial cropland                                     | CLN        | 498.65            | 914.61           | 83.42         |
| 1.7      | Aquaculture land                                       | NTS        | 624.66            | 674.93           | 8.05          |
| 1.9      | Other agricultural land                                | NKH        | 43.55             | 161.61           | 271.09        |
| 2        | Non-agricultural land                                  | PNN        | <b>4,199.22</b>   | <b>4,079.51</b>  | <b>-2.85</b>  |
| 2.1      | National defense land                                  | CQP        | 12.98             | 11.99            | -7.63         |
| 2.2      | Public security land                                   | CAN        | 1.93              | 1.08             |               |
| 2.3      | Industrial park land                                   | SKK        | 6.19              | 0                | -100.00       |
| 2.4      | Industrial cluster land                                | SKN        | 185.87            | 39.83            | -78.57        |
| 2.5      | Commercial and services land                           | TMD        | 10.00             | 8.20             | -18.00        |
| 2.6      | Land for non-agricultural production facilities        | SKC        | 52.41             | 42.09            | -19.69        |
| 2.8      | Land for construction-materials and ceramic production | SKX        | 6.21              | 0                | -100.00       |
| 2.9      | Land for infrastructure development                    | DHT        | 1,979.78          | 2,240.65         | 13.18         |
| 2.11     | Land for community activities                          | DSH        | 7.52              | 1.31             | -82.58        |
| 2.12     | Public amusement and recreation land                   | DKV        | 0                 | 0.74             | *             |
| 2.13     | Rural residential land                                 | ONT        | 1,319.67          | 1,340.83         | 1.60          |
| 2.14     | Urban residential land                                 | ODT        | 81.26             | 84.42            | 3.89          |
| 2.15     | Land for offices of state agencies                     | TSC        | 13.9              | 13.40            | -3.60         |
| 2.16     | Land for offices of public service units               | DTS        | 5.26              | 4.17             | -20.72        |
| 2.18     | Belief-establishment land                              | TIN        | 10.5              | 13.79            | 31.33         |
| 2.19     | Rivers, canals, ditches and streams land               | SON        | 237.84            | 240.49           | 1.11          |
| 2.20     | Special-use water surface land                         | MNC        | 50.89             | 36.43            | -28.41        |
| 2.21     | Other non-agricultural land                            | PNK        | 0.22              | 0.09             | -59.09        |
| <b>3</b> | <b>Unused land</b>                                     | <b>CSD</b> | <b>10.77</b>      | <b>5.02</b>      | <b>-53.39</b> |

**Note:** Order follows the provisions of Circular No. 01/2021/TT-BTNMT [16].

Results of the 2022 LUP Implementation (Table 2) show that the agricultural land group had a deviation of 13.46%, which is considerably higher than the findings in Nghi Loc district (1.79%) [6] and Nho Quan district (1.45%) [15]. Paddy rice land, particularly specialized wet-rice land, exhibited the highest deviation, at 16.69% compared with the approved plan. Other land types such as other annual cropland, perennial cropland, aquaculture land, and agricultural land overall were implemented effectively, with deviations below 10% relative to the planned targets.

The non-agricultural land group recorded a

deviation of 19.46%, significantly exceeding the results in Nghi Loc (4.38%) [6] and Nho Quan (3.88%) [15]. Within this group, industrial park land was implemented at only 12.89% (a deviation of 87.11%), industrial cluster land at 51.31% (a deviation of 48.69%), and land for non-agricultural production facilities at 59.60% (a deviation of 40.40%). These figures reveal very low levels of implementation compared to the approved plan. This situation reflects the district's trajectory toward industrialization; however, challenges in land acquisition and site clearance, as well as delays in the construction of several approved projects, have negatively

affected the achievement of annual LUP targets. On the other hand, some land use categories achieved good levels of implementation, such as public security land, public service and community land, rural residential land, rivers, canals, ditches and

streams land, and special-use water surface land, with deviations below 10%. Unused land achieved a very good implementation result, with only 1.01% deviation compared to the approved plan.

**Table 2. Results of the Implementation of the 2022 Land Use Plan in An Thi district**

| No.  | Land Category                                   | Code       | Planned (ha) [12] | Implemented (ha) | Deviation (%) |
|------|-------------------------------------------------|------------|-------------------|------------------|---------------|
|      | <b>Total natural area</b>                       |            | <b>12,997.95</b>  | <b>12,997.95</b> | <b>0.00</b>   |
| 1    | Agricultural land                               | NNP        | <b>7,678.69</b>   | <b>8,712.55</b>  | <b>13.46</b>  |
| 1.1  | Paddy rice land                                 | LUA        | 5,895.08          | 6,878.92         | 16.69         |
| 1.2  | Other annual cropland                           | HNK        | 90.65             | 92.49            | 2.03          |
| 1.3  | Perennial cropland                              | CLN        | 864.84            | 906.98           | 4.87          |
| 1.7  | Aquaculture land                                | NTS        | 658.34            | 672.55           | 2.16          |
| 1.9  | Other agricultural land                         | NKH        | 169.78            | 161.61           | -4.81         |
| 2    | Non-agricultural land                           | PNN        | <b>5,314.29</b>   | <b>4,280.38</b>  | <b>-19.46</b> |
| 2.1  | National defense land                           | CQP        | 13.49             | 11.99            | -11.12        |
| 2.2  | Public security land                            | CAN        | 1.08              | 1.08             | 0.00          |
| 2.3  | Industrial park land                            | SKK        | 970.81            | 125.1            | -87.11        |
| 2.4  | Industrial cluster land                         | SKN        | 216.73            | 111.21           | -48.69        |
| 2.5  | Commercial and services land                    | TMD        | 14.44             | 8.8              | -39.06        |
| 2.6  | Land for non-agricultural production facilities | SKC        | 70.62             | 42.09            | -40.40        |
| 2.9  | Land for infrastructure development             | DHT        | 2,229.10          | 2,232.61         | 0.16          |
| 2.11 | Land for community activities                   | DSH        | 1.31              | 1.31             | 0.00          |
| 2.12 | Public amusement and recreation land            | DKV        | 0.74              | 0.74             | 0.00          |
| 2.13 | Rural residential land                          | ONT        | 1,386.44          | 1,344.99         | -2.99         |
| 2.14 | Urban residential land                          | ODT        | 104.58            | 92.09            | -11.94        |
| 2.15 | Land for offices of state agencies              | TSC        | 11.75             | 13.4             | 14.04         |
| 2.16 | Land for offices of public service units        | DTS        | 4.04              | 4.17             | 3.22          |
| 2.18 | Belief-establishment land                       | TIN        | 13.79             | 1379             | 0.00          |
| 2.19 | Rivers, canals, ditches and streams land        | SON        | 238.98            | 240.49           | 0.63          |
| 2.20 | Special-use water surface land                  | MNC        | 36.3              | 36.43            | 0.36          |
| 2.21 | Other non-agricultural land                     | PNK        | 0.09              | 0.09             | 0.00          |
| 3    | <b>Unused land</b>                              | <b>CSD</b> | <b>4.97</b>       | <b>5.02</b>      | <b>1.01</b>   |

The results of the 2023 LUP (Table 3) implementation show that the agricultural land group had a deviation of 10.7%, much higher than the findings in Nghi Loc district (1.86%) [6] and Nho Quan district (1.52%) [15]. Within this group, paddy rice land showed a deviation of 13.6%, corresponding to 794.46 ha not converted, and other agricultural land recorded a deviation of 12.16%-the two categories with the largest deviations. The remaining agricultural land indicators were implemented at a good level, with aquaculture land achieving the best result, showing only a 0.64% deviation.

The non-agricultural land group was implemented at 84.73% of the approved plan, with a deviation of 15.27%, again much higher than the results in Nghi Loc (3.97%) [6] and Nho Quan (8.30%) [15]. Some categories achieved good implementation, such as land for infrastructure development (national, provincial, district, and communal levels), land for community activities, public amusement and recreation land, land for offices of public service units, special-use water surface land, and other non-agricultural land. Meanwhile, several categories performed better compared

to 2022 but still showed very high deviations from the approved plan: industrial park land was implemented at 61.36% (with 38.64% not realized), industrial cluster land at 36.63% (with 63.37% not realized), commercial and services land at 75.19%, and land for non-agricultural

production facilities at 75.91%. Unused land recorded a very high deviation of 43.43% compared to the planned target, indicating that the mobilization and utilization of unused land remain significantly limited.

**Table 3. Results of the Implementation of the 2023 Land Use Plan in An Thi district**

| No.                       | Land Category                                                                  | Code       | Planned (ha) [13] | Implemented (ha) | Deviation (%) |
|---------------------------|--------------------------------------------------------------------------------|------------|-------------------|------------------|---------------|
| <b>Total natural area</b> |                                                                                |            | <b>12,997.95</b>  | <b>12,997.95</b> | <b>0.00</b>   |
| 1                         | Agricultural land                                                              | NNP        | <b>7,634.32</b>   | <b>8,451.26</b>  | <b>10.70</b>  |
| 1.1                       | Paddy rice land                                                                | LUA        | 5,841.89          | 6,636.35         | 13.60         |
|                           | of which: Specialized wet-rice land                                            | LUC        | 5,841.89          | 6,636.35         | 13.60         |
| 1.2                       | Other annual cropland                                                          | HNK        | 85.11             | 92.77            | 9.00          |
| 1.3                       | Perennial cropland                                                             | CLN        | 869.85            | 901.64           | 3.65          |
| 1.7                       | Aquaculture land                                                               | NTS        | 662.76            | 667.03           | 0.64          |
| 1.9                       | Other agricultural land                                                        | NKH        | 174.71            | 153.47           | -12.16        |
| 2                         | Non-agricultural land                                                          | PNN        | <b>5,360.13</b>   | <b>4,541.67</b>  | <b>-15.27</b> |
| 2.1                       | National defense land                                                          | CQP        | 13.49             | 8.99             | -33.36        |
| 2.2                       | Public security land                                                           | CAN        | 1.36              | 1.08             | -20.59        |
| 2.3                       | Industrial park land                                                           | SKK        | 676.26            | 414.92           | -38.64        |
| 2.4                       | Industrial cluster land                                                        | SKN        | 345.31            | 126.49           | -63.37        |
| 2.5                       | Commercial and services land                                                   | TMD        | 11.73             | 8.82             | -24.81        |
| 2.6                       | Land for non-agricultural production facilities                                | SKC        | 53.3              | 40.46            | -24.09        |
| 2.9                       | Land for infrastructure development (national, provincial, district, communal) | DHT        | 2,376.76          | 2,180.21         | -8.27         |
| 2.11                      | Land for community activities                                                  | DSH        | 1.31              | 1.31             | 0.00          |
| 2.12                      | Public amusement and recreation land                                           | DKV        | 0.74              | 0.74             | 0.00          |
| 2.13                      | Rural residential land                                                         | ONT        | 1,461.23          | 1,358.98         | -7.00         |
| 2.14                      | Urban residential land                                                         | ODT        | 113.3             | 92.59            | -18.28        |
| 2.15                      | Land for offices of state agencies                                             | TSC        | 11.83             | 12.91            | 9.13          |
| 2.16                      | Land for offices of public service units                                       | DTS        | 4.11              | 4.32             | 5.11          |
| 2.18                      | Belief-establishment land                                                      | TIN        | 13.79             | 12.86            | -6.74         |
| 2.19                      | Rivers, canals, ditches and streams land                                       | SON        | 239.12            | 240.48           | 0.57          |
| 2.20                      | Special-use water surface land                                                 | MNC        | 36.41             | 36.41            | 0.00          |
| 2.21                      | Other non-agricultural land                                                    | PNK        | 0.09              | 0.09             | 0.00          |
| <b>3</b>                  | <b>Unused land</b>                                                             | <b>CSD</b> | <b>3.5</b>        | <b>5.02</b>      | <b>43.43</b>  |

Results of the 2024 LUP Implementation (Table 4) in An Thi district were better than in 2023. The agricultural land group recorded a deviation of 8.95%, higher than the 2.10% deviation reported in Nghi Loc district [6]. Paddy rice land had the highest deviation at 11.27%. Other agricultural land categories, including other annual cropland (9.76%),

perennial cropland (1.98%), aquaculture land (0.60%), and other agricultural land (3.67%), were implemented at very good levels. The non-agricultural land group was implemented at 87.22%, with an unimplemented area of 684.89 ha (12.78%), higher than the 5.19% deviation in Nghi Loc district. The land category with the highest deviation was public security

land, at 71.77% compared with the approved plan. Of particular concern were the land use categories related to industrial development, which continued to show low implementation rates: industrial park land achieved 61.38% (with 38.62% not realized), industrial cluster land reached 56.94% (43.06% not realized), commercial and services land achieved 55.73% (44.27% not realized), and land for non-agricultural production facilities achieved 71.03% (28.97% not realized). In addition,

urban residential land was implemented at 84.03% (15.97% not realized) and national defense land at 85.70% (14.30% not realized), both requiring stronger implementation measures. The remaining non-agricultural land use categories achieved good implementation results, with deviations below 10% relative to the approved plan. However, greater attention is still needed for the mobilization of unused land, which showed a high deviation of 45.09% compared to the approved target.

**Table 4. Results of the Implementation of the 2024 Land Use Plan in An Thi district**

| No.      | Land Category                                                                  | Code       | Planned (ha) [14] | Implemented (ha) | Deviation (%) |
|----------|--------------------------------------------------------------------------------|------------|-------------------|------------------|---------------|
|          | <b>Total natural area</b>                                                      |            | <b>12,997.95</b>  | <b>12,997.95</b> | <b>0.00</b>   |
| 1        | Agricultural land                                                              | NNP        | <b>7,633.73</b>   | <b>8,317.06</b>  | <b>8.95</b>   |
| 1.1      | Paddy rice land                                                                | LUA        | 5,849.69          | 6,509.22         | 11.27         |
|          | of which: Specialized wet-rice land                                            | LUC        | 5,849.69          | 6,509.22         | 11.27         |
| 1.2      | Other annual cropland                                                          | HNK        | 84.51             | 92.76            | 9.76          |
| 1.3      | Perennial cropland                                                             | CLN        | 879.78            | 897.19           | 1.98          |
| 1.7      | Aquaculture land                                                               | NTS        | 661.07            | 665.01           | 0.60          |
| 1.10     | Other agricultural land                                                        | NKH        | 158.69            | 152.87           | -3.67         |
| 2        | Non-agricultural land                                                          | PNN        | <b>5,360.77</b>   | <b>4,675.88</b>  | <b>-12.78</b> |
| 2.1      | National defense land                                                          | CQP        | 10.49             | 8.99             | -14.30        |
| 2.2      | Public security land                                                           | CAN        | 4.96              | 1.4              | -71.77        |
| 2.3      | Industrial park land                                                           | SKK        | 678.58            | 416.48           | -38.62        |
| 2.4      | Industrial cluster land                                                        | SKN        | 343.84            | 195.78           | -43.06        |
| 2.5      | Commercial and services land                                                   | TMD        | 15.63             | 8.71             | -44.27        |
| 2.6      | Land for non-agricultural production facilities                                | SKC        | 63.86             | 45.36            | -28.97        |
| 2.9      | Land for infrastructure development (national, provincial, district, communal) | DHT        | 2,319.20          | 2,191.33         | -5.51         |
| 2.11     | Land for community activities                                                  | DSH        | 1.31              | 1.31             | 0.00          |
| 2.12     | Public amusement and recreation land                                           | DKV        | 0.74              | 0.74             | 0.00          |
| 2.13     | Rural residential land                                                         | ONT        | 1,489.53          | 1,392.32         | -6.53         |
| 2.14     | Urban residential land                                                         | ODT        | 126.02            | 105.9            | -15.97        |
| 2.15     | Land for offices of state agencies                                             | TSC        | 13.07             | 13.59            | 3.98          |
| 2.16     | Land for offices of public service units                                       | DTS        | 4.32              | 4.32             | 0.00          |
| 2.18     | Belief-establishment land                                                      | TIN        | 13.8              | 12.86            | -6.81         |
| 2.19     | Rivers, canals, ditches and streams land                                       | SON        | 238.94            | 240.29           | 0.56          |
| 2.20     | Special-use water surface land                                                 | MNC        | 36.38             | 36.41            | 0.08          |
| 2.21     | Other non-agricultural land                                                    | PNK        | 0.09              | 0.09             | 0.00          |
| <b>3</b> | <b>Unused land</b>                                                             | <b>CSD</b> | <b>3.46</b>       | <b>5.02</b>      | <b>45.09</b>  |

Assessment of LUP Implementation by Deviation [d]: As shown in Table 5, during the

period 2021–2024, out of a total of 96 land use indicators, 50 indicators were implemented at

a *very good level* (with deviations below 10% compared to the approved plan), accounting for 50.28%. This proportion is considerably lower than the results reported in Nghi Loc district (78.70%) [6] and Nho Quan district (71.79%) [15]. Indicators with deviations between 10–20% accounted for 16.67%, while

those with deviations greater than 40% accounted for 19.79%. These results indicate that site clearance and forecasting of land use demand need to be given timely attention in order to avoid delays in the implementation of approved projects.

**Table 5. Results of LUP Implementation in An Thi District, 2021–2024, by Deviation Levels**

*Unit: Number of land use indicators*

| Year                  | Land Use Indicators   | Average deviation by land group (%) | Very good (<10%) | Good (10–20%) | Average (20.01–30%) | Poor (31.01–40%) | Very poor (>40%) | Total     |
|-----------------------|-----------------------|-------------------------------------|------------------|---------------|---------------------|------------------|------------------|-----------|
| <b>2021</b>           | Agricultural land     | 1.42                                | 3                | 0             | 0                   | 0                | 3                | 6         |
|                       | Non-agricultural land | -2.85                               | 5                | 3             | 2                   | 1                | 6                | 17        |
|                       | Unused land           | -53.39                              | 0                | 0             | 0                   | 0                | 1                | 1         |
|                       | <b>Total</b>          |                                     | <b>8</b>         | <b>3</b>      | <b>2</b>            | <b>1</b>         | <b>10</b>        | <b>24</b> |
| <b>2022</b>           | Agricultural land     | 13.46                               | 4                | 2             | 0                   | 0                | 0                | 6         |
|                       | Non-agricultural land | -19.46                              | 10               | 3             | 0                   | 1                | 3                | 17        |
|                       | Unused land           | 1.01                                | 1                | 0             | 0                   | 0                | 0                | 1         |
|                       | <b>Total</b>          |                                     | <b>15</b>        | <b>5</b>      | <b>0</b>            | <b>1</b>         | <b>3</b>         | <b>24</b> |
| <b>2023</b>           | Agricultural land     | 10.07                               | 3                | 3             | 0                   | 0                | 0                | 6         |
|                       | Non-agricultural land | -15.27                              | 10               | 1             | 3                   | 2                | 1                | 17        |
|                       | Unused land           | 43.43                               | 0                | 0             | 0                   | 0                | 1                | 1         |
|                       | <b>Total</b>          |                                     | <b>13</b>        | <b>4</b>      | <b>3</b>            | <b>2</b>         | <b>2</b>         | <b>24</b> |
| <b>2024</b>           | Agricultural land     | 8.95                                | 4                | 2             | 0                   | 0                | 0                | 6         |
|                       | Non-agricultural land | -12.78                              | 10               | 2             | 1                   | 1                | 3                | 17        |
|                       | Unused land           | 45.09                               | 0                | 0             | 0                   | 0                | 1                | 1         |
|                       | <b>Total</b>          |                                     | <b>14</b>        | <b>4</b>      | <b>1</b>            | <b>1</b>         | <b>4</b>         | <b>24</b> |
| <b>2021–2024</b>      | <b>Overall</b>        |                                     | <b>50</b>        | <b>16</b>     | <b>6</b>            | <b>5</b>         | <b>19</b>        | <b>96</b> |
| <b>Proportion (%)</b> |                       |                                     | 52.08            | 16.67         | 6.25                | 5.21             | 19.79            | 100.00    |

### 3.2.2. Assessment by Civil Servants and Public Employees on the Implementation of Land Use Planning and Annual Land Use Plans

The survey results presented in Table 6 show that the implementation of the LUP in An Thi district was assessed by officials at a good level, with an average score of 3.68 points. This result is consistent with the evaluations in Nghi Loc district (3.75 points) [6] and Nho Quan district (3.90 points) [15].

Among the eight evaluation criteria, one criterion was rated at a very good level (mean is 4.23), namely, the attention and support from authorities at all levels. 5 out of 8 criteria

were rated at a good level (means: from 3.40 to below 4.20). This indicates that the coordination in directing implementation and the cooperation among stakeholders have made efforts to improve the execution of the annual LUP. The issue of public disclosure of the LUP was also given attention and disseminated through mass media. However, two criteria—management of LUP implementation and progress of LUP implementation—were rated only at an average level. This partly reflects the need for more regular inspection, monitoring, and supervision to enhance the effectiveness of annual LUP implementation.

**Table 6. Evaluation by Civil Servants and Public Employees on the Implementation of the Annual Land Use Plan**

| Evaluation Criteria                                                                 | Very Poor | Poor      | Average   | Good      | Very Good | Total Score | Mean        | Rating      |
|-------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-------------|-------------|-------------|
| 1. Attention and support of authorities at all levels to annual LUPs                | 0         | 3         | 2         | 10        | 15        | 127         | 4.23        | Very good   |
| 2. Coordination of stakeholders in the preparation and implementation of annual LUP | 1         | 3         | 4         | 9         | 14        | 125         | 4.17        | Good        |
| 3. Public disclosure of the LUP                                                     | 0         | 3         | 6         | 11        | 10        | 118         | 3.93        | Good        |
| 4. Compatibility of the LUP with local development                                  | 2         | 3         | 10        | 9         | 6         | 104         | 3.47        | Good        |
| 5. Coordination in directing LUP implementation                                     | 3         | 2         | 9         | 10        | 6         | 104         | 3.47        | Good        |
| 6. Management of LUP implementation                                                 | 3         | 6         | 8         | 8         | 5         | 96          | 3.20        | Average     |
| 7. Progress of LUP implementation                                                   | 3         | 4         | 10        | 7         | 6         | 99          | 3.30        | Average     |
| 8. Results of LUP implementation                                                    | 2         | 4         | 7         | 6         | 11        | 110         | 3.67        | Good        |
| <b>Overall Evaluation</b>                                                           | <b>14</b> | <b>28</b> | <b>56</b> | <b>70</b> | <b>73</b> | <b>883</b>  | <b>3.68</b> | <b>Good</b> |

### 3.3. Solutions for Effective Implementation of the Annual Land Use Plan

Formulation and implementation of the annual LUP: The annual LUP is often approved later than required by law, with significant deviations between approved plans and actual implementation. Therefore, it is necessary to strengthen leadership attention, assign responsibilities clearly, and ensure close coordination among all levels of government, sectors, and relevant units. The quality of annual LUPs should be improved, with a strong emphasis on accurate forecasting of land demand for sectoral and regional development, and scientific calculations aligned with the district's socio-economic development strategy. Inspection, monitoring, and supervision of implementation should be carried out regularly. Public dissemination of land legislation should be expanded to enhance community awareness, enabling active participation in LUP formulation and monitoring. This also facilitates land-use conversion registration in cases requiring state permission, while strictly controlling unauthorized land-use conversions.

Mobilization of resources: All available

resources should be mobilized and used effectively to fully implement the annual LUP, ensuring socio-economic development of the district and establishing orderly land management and use in accordance with the law.

Application of science, technology, and innovation: New technologies and software should be applied to build online land databases serving management, monitoring, and implementation of the LUP, ensuring compliance with approved plans.

Establishment of a reserve land fund: Projects and works should be reviewed, classified, and a reserve land fund established. Resources should be prioritized for feasible projects. For projects lacking feasibility or with unreasonable scale, adjustments in timeline, scope, or cancellation are needed. Such adjustments or cancellations should be publicly announced via mass media to ensure transparency.

### 4. CONCLUSION

The results of the 2021–2024 LUP implementation in An Thi district show that 50 out of 96 land use indicators (50.28%) were assessed as very good (deviation below 10% compared to the approved plan). However, 19

indicators (19.19%) were assessed as very poor (deviation above 40%), mainly including industrial park land, industrial cluster land, and commercial–service land. Survey results from civil servants and public employees indicate that 1 out of 8 criteria was rated very good (means  $\geq 4.20$ ), 5 criteria were rated good (means from 3.40 to 4.19), and 2 criteria were rated average (means from 2.60 to  $< 3.40$ ).

To enhance the effectiveness of annual LUP implementation, the following comprehensive solutions are necessary: Strengthening the formulation and implementation of annual LUPs; Mobilizing resources effectively; Promoting science and technology applications; Establishing a reserve land fund.

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