

social housing construction. Provide incentives for investors in social housing projects, including exemptions from land use fees, VAT, corporate income tax reductions, access to preferential loans from policy banks and commercial credit institutions, and support for technical infrastructure investment within the project.

- Allocate budgetary funds for constructing state-owned social housing for eligible individuals, prioritizing high-quality human resources. Support partial investment in technical infrastructure within project boundaries. In the period leading up to 2025, allocate local budget plans for pilot social housing projects owned by the state in the city.

- Implement mechanisms for entrusting provincial and district budget funds to the provincial Social Policy Bank according to credit law to prioritize loans for public servants, employees, and workers needing social housing.

- Integrate housing support into central government programs to utilize government funds for housing construction and renovation for those with housing difficulties, concentrating resources to improve program efficiency.

- Through salary support policies, facilitate public sector employees to buy or lease social housing in the area.

### 3.3. Solutions for Science and Technology

- Encourage organizations and individuals to apply, design, construct, produce, and supply innovative building materials and technologies in housing development to

enhance technical and aesthetic quality, economic efficiency, and reduce costs.

- Prioritize investment projects using high-quality materials and technologies. Provide incentives for businesses to use locally available materials, energy-saving new materials, non-fired materials, and recycled materials. Promote the development of local branded building materials like Dat Viet bricks, Giếng Đáy tiles, Ha Long tiles, Dong Trieu bricks, Viglacera ceramics, and other premium finishing materials.

- Build a database on housing development and beneficiaries of social housing policies.

- Publicize housing information and real estate market data through media to ensure all interested parties can access information.

### 4. Conclusion

To implement the province's set goals, Ha Long City has focused on developing housing to attract high-quality human resources, skilled workers, and employees in economic and industrial zones. However, assessments reveal several issues with current regulations and policies in meeting the specific housing needs of workers, such as coal miners and high-quality human resources. To address these challenges and limitations, the authors propose solutions related to policy improvements, funding, and technological advancements to support housing for these groups and contribute to social welfare objectives in Ha Long City./.

# Land fund for social housing development in hanoi city, current situation and challenges

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## Abstract

Social housing is a special concern of the Party, State and Hanoi City. Over the years; Housing laws are issued relatively fully and synchronously, creating a favorable legal corridor to promote housing development in general, including social housing. However, the urbanization process is taking place strongly, at a fast pace, with economic development leading to an increasing demand for housing in cities and urban areas. The demands for social housing are very large while the supply accounts for a low proportion of the total housing area built, so it cannot meet the actual demands. One of the reasons leading to this situation is that the land fund for social housing development is not consistent with reality. Therefore, research examining the current status quo, regulations on social housing development and considering planning orientation to find appropriate solutions will be important at the present time.

**Key words:** social housing, social housing for low-income people, social housing development in Hanoi, land fund for social housing in Hanoi

## 1. Overview of the current status of social housing development in Hanoi City

### 1.1. Guidelines and legal policies on social housing development in the previous period

The term "social housing fund" was first mentioned in the Prime Minister's Decision on housing development orientation to 2020, as "housing fund for sale in installments and for rent". Buy and rent for policy beneficiaries who have difficulty improving their accommodation [1]. When the 2005 Housing Law was promulgated and took effect, the term "social housing" was included in the law as a method of housing development and was completed in the 2014 Housing Law and Decrees, Guidance Circular.

From very early on, the City People's Committee and Hanoi People's Council have thoroughly grasped the Party and Government's instructions on the housing floor fund and land fund expected to develop social housing (Hanoi People's Committee has issued Regulations on management of social housing). Management of investment projects to renovate and construct housing areas and urban areas in Hanoi City [2-5]; the City People's Council has also issued regulations on the ratio of residential area and housing for housing development society in commercial housing development projects in new urban areas in Hanoi city) [6]...

However, going through many stages and times of applying regulations of different legal documents resulted in products that were not consistent and difficult in management (at times projects with Any scale must arrange a land fund and floor fund, but there are times when it is prescribed to arrange social housing funds according to scale (for example: Projects with a scale of 3000m<sup>2</sup> must be arranged, there are periods when it is stipulated that the project has If the scale is from 10 hectares, it must be arranged) but there is a period when projects under 10 hectares are allowed, payment in cash is allowed;...)

### 1.2. Overview of current status of social housing development programs and projects in Hanoi City

Implementing the National Housing Development Strategy for the period 2021-2030, with a vision to 2045, the directions of the Central Government, the Government, and the City People's Committee have approved the Hanoi Housing Development Program for the period 2021- 2030 [7]; Approval of Hanoi City's Housing Development Plan for the period 2021-2025 [8]. Hanoi City's Social Housing Development Plan for the period 2021-2025 [9].

On April 3, 2023, the Prime Minister approved the Project "Investment in building at least 01 million social housing apartments for low-income people and industrial park workers in the period 2021-2030" [10], in which Hanoi was assigned a target according to the Project: 56,200 units, of which 18,700 units in the period 2021-2025 and 37,500 units in the period 2026-2030.

Hanoi City has integrated the implementation of the Project with directing the implementation of Resolution No. 33/NQ-CP dated March 11, 2023 of the Government on a number of solutions to solve and promote the market. safe, healthy, sustainable real estate; Establish a special working group of the city to remove difficulties and obstacles and effectively support businesses and investors in the city.

## 2. Current status and challenges of land fund for social housing development.

### 2.1. About the goals for social housing development

Based on the targets in the City's Housing Development Program for the period 2021-2030 [7] to determine housing development goals for the period 2021 - 2025 [8]:

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Figures 1. Housing development goals

The average housing area per capita in the entire City is 29.5 m<sup>2</sup>/person, of which urban areas reach 31 m<sup>2</sup>/person and rural areas reach 28 m<sup>2</sup>/person; Minimum housing area strives to reach 10.0 m<sup>2</sup>/person.

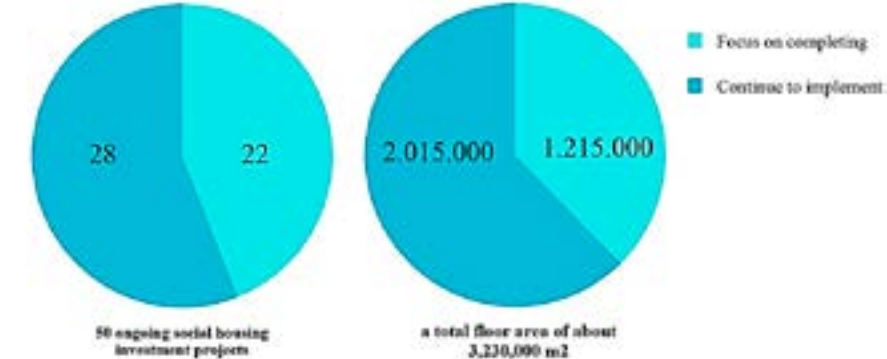
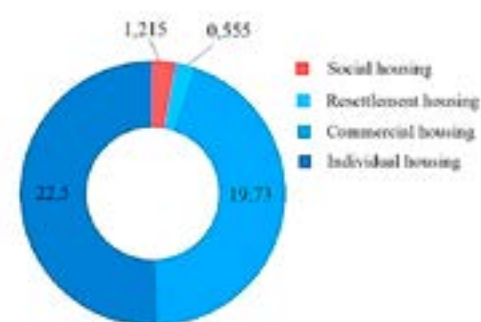
Total residential floor area is about 44 million m<sup>2</sup> of residential floor, of which:

+ Regarding social housing: new development of about 1,215 million m<sup>2</sup> of housing floor; Preparing to invest in 1-2 independent (concentrated) social housing areas and research and develop detailed planning for 2-3 areas. The rate of social housing for rent must reach the minimum according to Central regulations, and rental housing must account for at least 10% of the social housing area in the project.

+ Regarding resettlement housing: new development of about 0.555 million m<sup>2</sup> of housing floor.

+ Regarding commercial housing: new development of about 19.73 million m<sup>2</sup> of housing floor; In housing and urban area construction investment projects, ensure the ratio of rental housing is at least 5% and rental housing is at least 5% of the total apartment floor area at the project. Implementing renovation and reconstruction of 04 old apartment complexes with dangerous level D buildings (Giang Vo; Thanh Cong; Ngoc Khanh; Ministry of Justice), apartment buildings and apartment buildings subject to demolition for renovation, rebuilt according to regulations (which arise during the inspection process) and other apartment complexes and apartment buildings that are feasible and eligible for implementation according to regulations.

+ Regarding individual housing: new development of about 22.5 million m<sup>2</sup> of floor space (about 4.5 million m<sup>2</sup> of floor space/year).



Figures 2. Ongoing social housing investment projects

conditions for demolition, renovate and rebuild according to regulations.

Research and implement schemes and projects to gather and resettlement old single apartment buildings in Hoan Kiem district and other districts according to regulations of Decree 69/2021/ND-CP, Scheme and other Plan to implement the Project to renovate and rebuild old apartments in the City was approved.

Continue to review areas and apartment buildings that are eligible for renovation and reconstruction according to regulations to build and submit to the City People's Committee for promulgation and organize the implementation of plans to renovate and rebuild old apartments. in Hanoi city in the next batches (periodically every 6 months).

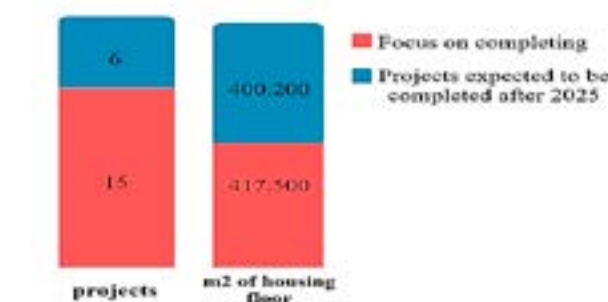
### 2.3. Social housing development plan

For 50 ongoing social housing investment projects with a total floor area of about 3,230,000 m<sup>2</sup>:

+ Focus on completing 22 projects with about 1,215,000 m<sup>2</sup> of housing floor that can be completed in the period 2021-2025.

+ Continue to implement 28 projects with about 2,015,000 m<sup>2</sup> of housing floor expected to be completed after 2025.

Urgently complete investment policy approval procedures to organize bidding to select investors for 02 social housing areas and deploy detailed planning for 03 social housing areas; At the same time, research and propose independent social housing areas along Ring Road 4 and other locations in the area. Based on the approved detailed planning, the City assigned the district-level People's Committee to research, prepare and submit project investment policies for approval,



Figures 3. Resettlement housing development plan

The City strives to develop housing equal to or greater than the total housing floor area target determined in this Plan; Periodically update and adjust the number of projects (added or removed from the list) to suit reality. Investors have reports on the feasibility and progress of project implementation, as a basis for updating the Plan according to regulations.

Regarding housing quality: Continue to eliminate temporary houses and simple houses associated with urban reconstruction and embellishment; Increase the rate of solid housing throughout the City to 90%, of which urban areas reach 95% and rural areas reach 85%.

Based on the current housing situation and progress of investment projects to build commercial housing, social housing, and resettlement housing that are being implemented, the ability to complete the projects, the housing development plan is The year period 2021 - 2025 in the City is as follows table 1.

### 2.2. About renovating and rebuilding old apartments

Continue to review and urge to speed up the progress of investment in renovating and rebuilding apartment buildings for 09 ongoing projects.

Implement effectively and speed up the progress of renovating and rebuilding apartment buildings according to 02 perspectives, 03 goals, 08 key tasks and solutions set out in the Renovation and Reconstruction Project old apartment buildings in the City [11-13] and implementation progress according to 05 Plans to implement the Project and plans to renovate and rebuild apartment buildings in the City in the next phases according to regulations determined. In particular, priority will be given to areas and apartment buildings with dangerous level D apartments, old areas and apartment buildings that will be deployed in phase 1, and old areas and apartment buildings that must meet the

Table 1: The housing development plan is The year period 2021 – 2025 [8]

Year	Social Housing (m <sup>2</sup> floor)	Resettlement house (m <sup>2</sup> floor)	Official housing (m <sup>2</sup> floor)	Commercial housing (m <sup>2</sup> floor)	Individual house (m <sup>2</sup> )	Annual total (m <sup>2</sup> floor)
2021	88.200	32.000	0	352.000	4.500.000	4.972.200
2022	257.000	99.000	0	985.000	4.500.000	5.841.000
2023	32.900	95.000	0	4.924.000	4.500.000	9.551.900
2024	361.700	108.000	0	5.607.000	4.500.000	10.576.700
2025	475.200	221.000	0	7.862.000	4.500.000	13.058.200
Total	1.215.000	555.000	0	19.730.000	22.500.000	44.000.000

as a basis for organizing the selection of investors for concentrated social housing areas according to regulations determined.

Arrange and use money collected from the 20%, 25% land fund, capital from the budget or loans from the City Development Investment Fund to prioritize social housing development, including: organizational work planning/ adjustment of planning, site clearance or infrastructure investment in social housing investment projects; Research, organize and deploy or encourage socialization of investment in the construction of social housing

investment projects to serve workers in industrial zones, clusters or industrial production facilities in the City.

Continue to review land plots belonging to 20% and 25% land funds in commercial housing and urban area construction investment projects, propose plans for use to build social housing, and supplement add the City's social housing fund, compensate for behind schedule projects in the 2021-2025 period and prepare to overlap/transition to the post-2025 period.

Set aside a minimum percentage of social housing for rent according to Central regulations, rental housing must account for at least 10% of the social housing area in the project according to the Hanoi City Housing Development Program The period 2021-2030 has been approved [7-8].

### 2.4. Resettlement housing development plan

For 21 ongoing investment projects to build resettlement housing with about 817,700 m<sup>2</sup> of housing floor:

+ Focus on completing 15 projects with about 417,500 m<sup>2</sup> of housing floor that can be completed in the period 2021 - 2025.

+ Urging and reviewing the continued implementation of 06 projects expected to be completed after 2025 with about 400,200 m<sup>2</sup> of housing floor.

Arrange budget capital to buy back a number of commercial housing funds for resettlement by ordering and repaying construction costs in a number of commercial housing investment projects with regenerated housing funds. settlement must be handed over to the City.

Invest in new construction of 04 resettlement housing investment projects with a total land area of about 5.4 hectares, 3,617 apartments, equivalent to 289,360 m<sup>2</sup> of housing floor; Of which 03 projects are expected to be completed in the period 2021-2025 with 1,712 units, equivalent to about 136,960 m<sup>2</sup> of housing floor approved [7-8].

During the implementation of this Plan, every year the City continues to review and specifically assess resettlement needs and arrange temporary accommodation for owners and users of apartment buildings during the period of time. Carry out a project to renovate and rebuild apartment buildings in Hanoi City to propose a roadmap and investment model to build resettlement housing that is appropriate to reality or carry out a project to buy back funds. commercial housing, use social housing funds to create housing funds for resettlement, arrange temporary accommodation



according to regulations to include in the Annual Housing Development Plan and adjust this Plan be suitable.

### 3. Capital needs and expected capital sources for housing development

#### 3.1. Capital needs

According to the Hanoi City Housing Development Program for the period 2021-2030 approved by the City People's Council [14] and the City People's Committee [7], the total capital need to invest in housing construction in the City in the period 2021- 2025 is about 437,000 billion VND, of which:

- + Capital for commercial housing construction is about 250,000 billion VND.

- + Capital to build individual houses built by people themselves is about 165,000 billion VND.

- + Capital for social housing construction is about 12,500 billion VND.

- + Capital to build resettlement housing is about 9,500 billion VND (of which: about 4,200 billion VND to complete construction of resettlement housing for ongoing projects; about 4,860 billion VND to invest in new construction of 05 projects) approved [7-8].

#### 3.2. Expected capital source

Budget capital: about 5,800 billion VND, of which: About 283 billion VND to develop social housing, of which: (i) About 11.6 billion VND to prepare/adjust detailed planning of 05 concentrated social housing areas and 02 worker housing projects; (ii) About VND 223.9 billion to complete and adjust house items A2 and A3 under the Phap Van - Tu Hiep housing construction investment project into social housing for rent, preparing to invest in the A4 house category into social housing for rent in this project; (iii) About 47.5 billion VND to carry out investment preparation for 05 concentrated social housing areas and 02 worker housing projects (organize investment policy proposals and investor selection). About VND 4,860 billion to invest in new construction of 05 investment projects to build resettlement housing (determined in Resolution No. 21/NQ-HDND dated September 23, 2021 of the City People's Council on approving the Plan 5-year medium-term public investment plan 2021-2025 in Hanoi city), which includes about 3.7 billion VND to prepare investment policy proposals and organize bidding to select investors for 03 housing projects. in resettlement.

The city allocates budget capital to buy back apartments for resettlement in commercial housing projects that order resettlement and commercial housing and reimburse construction costs for apartments that must be handed over. for the City in some commercial housing projects with resettlement housing funds that must be handed over to the City. About 641.3 billion VND to: organize detailed planning of old areas and apartment buildings; inspect and prepare investment policy proposals to renovate and rebuild old apartment buildings in the City according to the provisions of the Housing Law and Government decrees (of which: About 58 billion VND to organize planning; About 535 billion VND to inspect all apartment buildings; About 48.3 billion VND to prepare investment policy proposals and select investors (in case the owners cannot choose the house). investment) in 10 old apartment complexes). About 1.9 billion VND to organize annual housing development planning. About 13.3 billion VND to organize surveys and statistics on annual

housing development targets according to the Plan. About 0.4 billion VND to research the investment research project to build social housing for resettlement in Hanoi City for the period 2022-2025 and orientation to 2030.

It is expected that the above budget capital needs will be considered and adjusted by the competent authority to suit the actual implementation of each project, in each phase, ensuring the economical use of budget capital and development. maximize investment efficiency.

#### 3.3. Socially mobilized capital (off-budget)

Investing in the construction of commercial housing, renovating and rebuilding old apartments, resettlement housing with capital from businesses, credit institutions...;

Investment in social housing construction mainly comes from capital sources from businesses, preferential credit organizations, social policy banks...;

Self-built individual houses of households are built with the accumulated capital of the households' income.

### 4. Some directions to contribute to solving the problem of land fund for social housing development in Hanoi city.

#### 4.1. About policy mechanisms

Regularly inspect and urge the implementation of the City's housing development plan; Update and adjust the Plan according to regulations to ensure compliance with the City's socio-economic development situation in each period. Build a city-wide housing database; Manage the portfolio of housing and urban area construction investment projects in the City's 5-year and annual housing development plan as a basis for approval/adjustment of investment policies. Develop and promulgate a Plan to develop various types of housing (social housing, resettlement housing, temporary housing...) to detail the contents of this Plan.

Enhance the role of Housing Development Plan in housing development management in housing investment projects and urban areas with housing from the stage of preparation and submission of detailed planning and policies (input) until housing products are allowed to be traded (output) to control and regulate to ensure the balance of housing supply and demand to complete the set housing development goals and targets. Strengthen the state housing management functions of state housing management agencies at the City and district levels.

Researching and developing regulations on decentralization and authorization in construction investment management and post-investment management for urban area and housing area projects; There are mechanisms and policies to control and create conditions for the synchronous development of urban areas and housing areas in the City. Review, amend, supplement, and promulgate regulatory documents according to authority to remove difficulties and obstacles related to the housing sector (especially the implementation of transitional projects) and investment management. Investment in the construction of technical and social infrastructure projects, which clearly stipulates: Investment responsibilities, handling sanctions, assignment of monitoring, synthesis, urging, inspection, examination, supervise investment projects with responsibility, ensuring compliance with regulations; or propose central agencies to guide, consider and resolve issues within their responsibility and authority.

There are policy mechanisms to support construction investment from budget capital for technical and social

infrastructure projects in independent (concentrated) social housing areas and resettled housing areas. Concentrated housing in a civilized and modern direction to ensure quality of life and reduce housing costs for people. Research and develop regulations to improve housing quality, especially social housing and resettlement housing.

Improving the capacity of investors to implement housing development projects through adding regulations on conditions that need to be met by investors to ensure that the investor must have sufficient functions, capacity and experience. Implement housing investment projects, giving priority to investors with plans that are highly appreciated for planning solutions, architecture, investment in construction of technical infrastructure, social infrastructure, and project implementation progress. project, putting the project into use, and operating management solutions.

Enhancing efficiency, openness and transparency in the investor selection process through auction and bidding methods. Strengthen supervision and apply sanctions to ensure that investors comply with commitments, obligations, and approved content during project implementation.

Researching and developing regulations and sanctions to strictly handle investors with poor capacity, deliberately delaying investment in the construction of technical and social infrastructure projects, or have Serious violations (or violations that have not been thoroughly handled) in the management, operation and use of apartment buildings are allowed to participate in investment projects to build new housing in the City.

#### 4.2. About Planning

Accelerating the progress of preparing and approving the overall adjustment of the General Capital Construction Planning for the period 2021-2030, vision to 2050, establishing Hanoi Capital Planning for the period 2021-2030, vision to 2050, Hanoi City Urban Development Program; The remaining satellite urban subdivision plans have not yet been approved; Establish and approve plans related to areas expected to develop into districts and build a city model under the Capital in the North (Dong Anh, Me Linh, Soc Son) and West ( Hoa Lac and Xuan Mai regions); Building smart urban areas on the basis of developing areas on both sides of the Nhat Tan - Noi Bai axis; Focus on implementing planning, construction investment, and stabilizing population on both banks of the Red River and Duong River; Form new urban areas and satellite urban areas to create architectural highlights and symbols of the Capital; Planning implementation and construction investment according to planning must be associated with ensuring social security and sustainable livelihoods of people (planning commercial service areas, improving and stabilizing life, etc.); District construction planning, commune construction general planning, rural residential area planning, architectural management regulations, urban design, as a basis for implementing investment projects to build housing and residential areas. urban areas, individual houses in urban and rural areas; Harmonious rural area construction planning, associated with urban development, preserving traditional cultural identity, synchronously connected with urban area planning, in accordance with planning and architectural management regulations, preserving and promoting the value of valuable architectural works.

Innovating and improving the quality of planning work; Strictly control planning management and planning

adjustments in projects approved by competent authorities; Guide investors to adjust planning to ensure compliance with regulations; Fully update data information, clarify the grounds and basis for adjusting planning; There are sanctions for cases where investors intentionally delay in preparing and submitting for appraisal of adjusted planning, or do not comply with regulations. Regularly update, publicly and transparently, planning information and adjusted planning at projects in the City.

During the process of preparing and approving urban planning, rural residential construction planning, and industrial park planning, land funds must be allocated for housing development to ensure compliance with planning and use plans. approved land; Review and arrange land plots for trade union institutions to serve workers in industrial parks and export processing zones; Update housing and urban area construction investment projects in the land use plans of the City and localities in each period.

In the process of preparing and adjusting general planning, urban zoning planning, detailed planning, total ground and architectural plans, and planning for reconstruction of existing residential areas in the direction of reducing density. Residential combination of modern high-rise housing model, synchronous technical infrastructure, social infrastructure, or plans to renovate and upgrade existing residential infrastructure; Strictly manage the development of high-rise housing and population growth in the central urban area, including in districts in the historic inner-city area, minimize the development of apartment buildings in projects. investment projects to build new commercial housing and social housing, except for urban reconstruction projects, such as: renovating and rebuilding apartment buildings and resettlement to minimize population growth and infrastructure overload; In the remaining areas, minimize the development of townhouses and low-rise villas and maximize apartment buildings in housing and urban area construction projects to effectively use land funds.

When formulating and approving planning investment projects to build commercial housing, urban areas, and industrial parks, it is necessary to arrange a land fund for investment in social housing construction and a reserve land fund for development to serve future renovation and reconstruction of apartment buildings at the end of their useful life, the ratio of technical infrastructure land (drainage, wastewater treatment, garbage, communications...), Social strata ensure synchronization and compliance with current norms, standards and regulations.

Carrying out regulatory review of approved plans but the implementation time is long and not feasible to report to competent authorities for consideration and decision.

#### 4.3. About Land

Review and synthesize land funds in the City, propose investment in construction of social housing, resettlement housing and auction of land use rights, create capital to build technical and infrastructure social class; Including planning, land use plans, construction land allocation targets to implement housing development plans.

Continue to accelerate the relocation of industrial production facilities and hospitals that cause environmental pollution; Institutions of higher education, vocational education and agencies and units in the inner city area do not comply with regulations, standards and planning to create land funds for urban and housing development.

Strengthen the review, examination, and inspection of land management and use for investment projects to build housing, urban areas, technical infrastructure, and social infrastructure in urban areas. town, housing area; Resolutely revoke and strictly handle projects that are slow to be implemented, have been allocated or leased land but are slow to put the land into use or violate land laws.

#### 4.4. Recourses

Reasonable arrangement of capital from the City budget, including effective use of money collected from 20% and 25% residential land funds in commercial and residential housing construction investment projects. Urban area 1 to invest in building social housing for policy beneficiaries, workers and laborers in industrial zones and clusters, and student housing.

Exploit land resources to create capital for housing development, especially resettlement housing and social housing for rent according to the "Project on exploiting land resources to create capital for socio-economic development Hanoi City Council for the period 2021 - 2025 and the following years.

Mobilizing socialized capital for housing development through many forms (such as mobilizing capital from

businesses, banks, credit institutions, local development investment funds, stocks, bonds and other legal capital sources) to create a stable, long-term housing finance system and reduce dependence on the state budget.

Effectively mobilize foreign capital through international financial mobilization mechanisms such as: investment funds, real estate trust funds, joint ventures, and partnerships to implement housing investment projects; create conditions for foreign investors to participate in social housing development.

Reasonably arrange capital from the City budget, mobilize other capital sources to develop housing for policy beneficiaries, for subjects under the National Target Programs on sustainable poverty reduction, construction Building new rural areas, socio-economic development in ethnic minority and mountainous areas has been approved by the Prime Minister.

Reasonably arrange capital from the City budget, mobilize other capital sources to carry out inspection, make detailed planning, and deploy renovation and reconstruction of apartment buildings according to the Project and implementation plans. Declare the project to renovate and rebuild old apartments in the City and legal regulations./.

## Proposal for surface water drainage solutions to minimize flooding for Thai Nguyen city towards sustainable urban development



Phan Duc Hoang

### Abstract

The article summarizes and evaluates the current situation of planning, surface drainage infrastructure and the current status of urban drainage system management in Thai Nguyen city in the context of urbanization. The research object is within the scope of urban traffic routes and urban area projects (Projects) that have been and are being implemented. Based on reference to construction standards and criteria, the article proposes a number of planning and management solutions, constructing and developing drainage systems in a sustainable and environmentally friendly manner, contributing to the sustainable urban development of Thai Nguyen city.

**Key words:** Urban management for sustainable development, Thai Nguyen city drainage, Urban management, Flooding in Thai Nguyen city, Thai Nguyen city planning

### 1. Introduction

In the current context of environmental degradation and global climate change, sustainable urban development has become one of the important goals for all countries in the world in the 21st century. The direction of sustainability at the scale of all urban areas and projects in Vietnam has been legalized and gradually put into practice in Vietnam. Planning, designing and organizing urban road networks towards sustainable urban traffic development is an urban planning and development trend that has appeared in recent decades and is on the rise worldwide. A sustainable urban transportation system is a transportation system with the goals of no flooding, reducing emissions, ensuring comfort and safety for users, and promoting or supporting people towards a sustainable, healthy and socially cohesive lifestyle, at the same time, ensuring current and future needs in terms of economic, social and environmental aspects.

In 2022, the Politburo and Central Committee of the Communist Party of Vietnam issued Resolution 06-NQ/TW dated January 24, 2022 on "Planning, construction, management and sustainable development of Vietnamese urban areas to 2030, vision to 2045" with 5 groups of perspectives and 6 main solutions. It is the basis for building a new, dynamic, prosperous and sustainable image for urban areas in Vietnam.

The Northern Midlands and Mountains of Vietnam is a large region with 14 provinces, 21 districts and 1 town. The policy of the Party and State is to shorten the gap between regions, therefore, urban development in the midland and mountainous regions is receiving increasing attention, especially developing the road network along urban administrative boundaries.

Among the major cities in the North, Thai Nguyen city is the central city of the Northern Midlands and Mountains region. Established in 1962 and developed into an industrial city, after many adjustments and transformations to suit socio-economic development, it is the 10th most populous city in the country now with an area of 23,874.36 hectares and a population of approximately 400,000 people, acting as a provincial city and urban area Type I (Decision No. 1645/QĐ-TTg dated September 1, 2010 of the Prime Minister). Thai Nguyen city is currently the political, economic, cultural, educational, scientific - technical, medical, tourism and service center of Thai Nguyen province and the Northern Midlands and Mountains. In the inter-regional transportation system, Thai Nguyen city acts as a traffic hub with 4 national highways passing through National Highway 3, National Highway 17, National Highway 37, National Highway 1B; 1 Hanoi - Thai Nguyen expressway; The Thai Nguyen - Bac Kan expressway is also the gateway to the Northeastern provinces such as Cao Bang, Bac Kan, Ha Giang, Tuyen Quang, and Lang Son.

The general planning for Thai Nguyen city construction until 2035 has been approved and adjusted by the Prime Minister in Decision No. 1989/QĐ-TTg dated November 26, 2021 with the general goal to develop Thai Nguyen as a sustainable, modern city, the political, economic, cultural, educational, medical, tourism and service center of Thai Nguyen province & the Northern Midlands and Mountains region; is a development pole of Hanoi Capital region. At the same time, Thai Nguyen city has an important position in security and defense, is a gateway city, and plays an important connecting role between the Hanoi Capital Region and the Northern Midlands and Mountains Region. In that context, concretizing the strategies and development orientations of the Country, Region, Province and Thai Nguyen City in investing in urban road networks towards sustainable and modern

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