

Key Strategies Toward Sustainable Social Housing Stock Development in Vietnam

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Abstract

In response to its commitment to Sustainable Development Goal 11, the government of Vietnam has launched an ambitious national programme aiming to deliver one million social housing units for low-income groups and industrial park workers by 2030. While the quantitative target is clear, the qualitative dimensions of sustainability—covering economic, social, and environmental aspects—remain under-addressed. This study provides a comprehensive assessment of Vietnam’s social housing development, drawing on national data, regional case studies, and policy analyses. It systematically identifies 20 key barriers to sustainable social housing development, categorised under three pillars of sustainability, and evaluates their implications for practice and governance. In response, seven strategic directions are proposed, including financial incentives, regulatory reform, private sector engagement, and green technology adoption. The findings emphasise the need for a more integrated, inclusive, and adaptive housing strategy to close the gap between policy targets and implementation realities. This study contributes to the evolving discourse on affordable housing by aligning national efforts with global sustainability agendas, while offering practical insights for improving housing equity, resilience, and long-term viability in Vietnam.

1. Introduction

Access to adequate, safe, and affordable housing is internationally recognised as a fundamental human right and a prerequisite for sustainable urban development. Within the framework of the United Nations Sustainable Development Goals (SDGs), Goal 11—Sustainable Cities and Communities—specifically aims to “make cities and human settlements inclusive, safe, resilient and sustainable.” Among its core targets, SDG 11.1 calls for ensuring access for all to adequate, safe, and affordable housing and basic services, with Indicator 11.1.1 tracking the proportion of urban populations living in slums, informal settlements, or inadequate housing. This target is especially relevant for rapidly urbanising countries such as Vietnam, where rising inequality, land scarcity, and speculative real estate practices have exacerbated housing unaffordability for low- and middle-income groups [1].

To address this growing concern, the Vietnamese Government launched the national programme titled “Investment in the Construction of at Least One Million Social Housing Units for Low-Income Groups and Industrial Park Workers for the Period 2021–2030” [2]. The programme aims to construct 428,000 social housing (SH) units by 2025 and an additional 634,200 units by 2030, focusing on urban low-income earners and industrial workers.

However, implementation progress has fallen short. As of 2024, only 66,755 units had been completed, with an additional 114,618 units under construction, well below the levels required to meet mid-term targets [3].

Concurrently, Vietnam's labour market has witnessed moderate expansion alongside incremental increases in income. By the fourth quarter of 2024, the total number of employed workers reached approximately 52.1 million, reflecting a quarterly increase of 414.9 thousand and a year-on-year rise of 639.1 thousand. During the same period, the average monthly income stood at USD 311, an increase of USD 20.89 over the preceding quarter and USD 33.82 compared to Q4/2023. Across the five years from 2020 to 2024, the average monthly wage of Vietnamese workers was estimated at USD 251 [4], [5] (Figure 1).

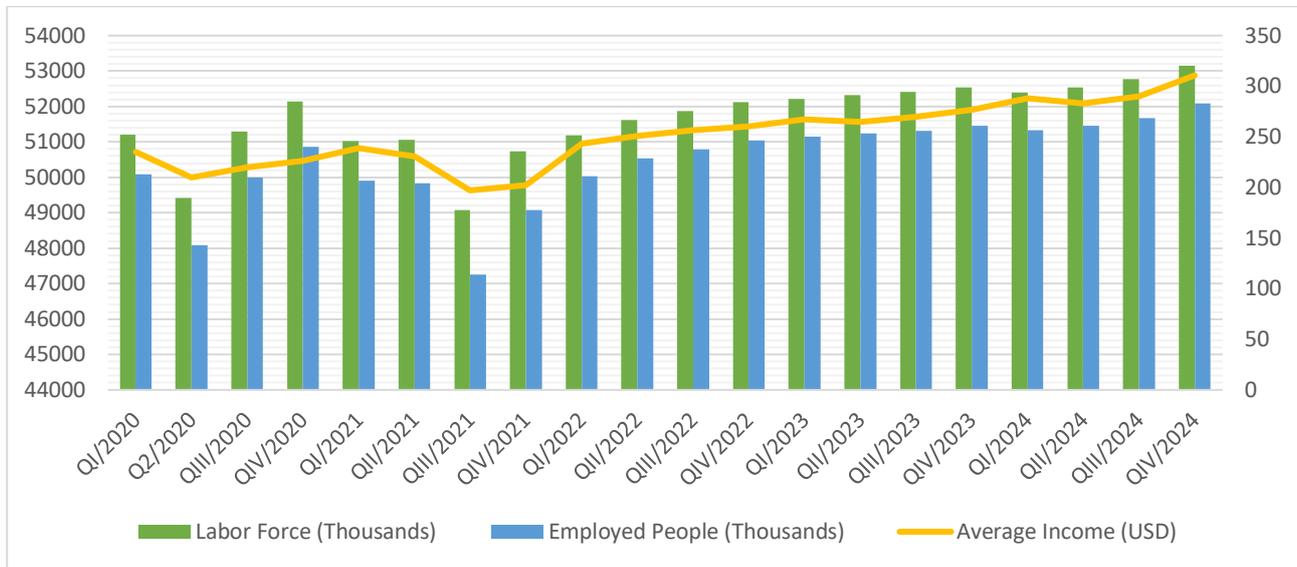


Fig. 1 Labour market and income situation in Vietnam (2020 - 2024)

A regional disaggregation of wage trends between 2021 and 2024 reveals further nuances. In Hanoi, average monthly income rose from USD 228 to USD 287, representing a growth rate of 25.9%. Da Nang exhibited a slightly higher rate of increase (28.1%), with incomes rising from USD 199 to USD 255, despite originating from a lower base. Ho Chi Minh City, while experiencing relatively slower growth (18.4%), saw wages increase from USD 228 to USD 270. These patterns reflect a generally upward trajectory in urban incomes across major Vietnamese cities, albeit with regional disparities that underscore broader socio-economic imbalance [6], [7], [8] (Figure 2).

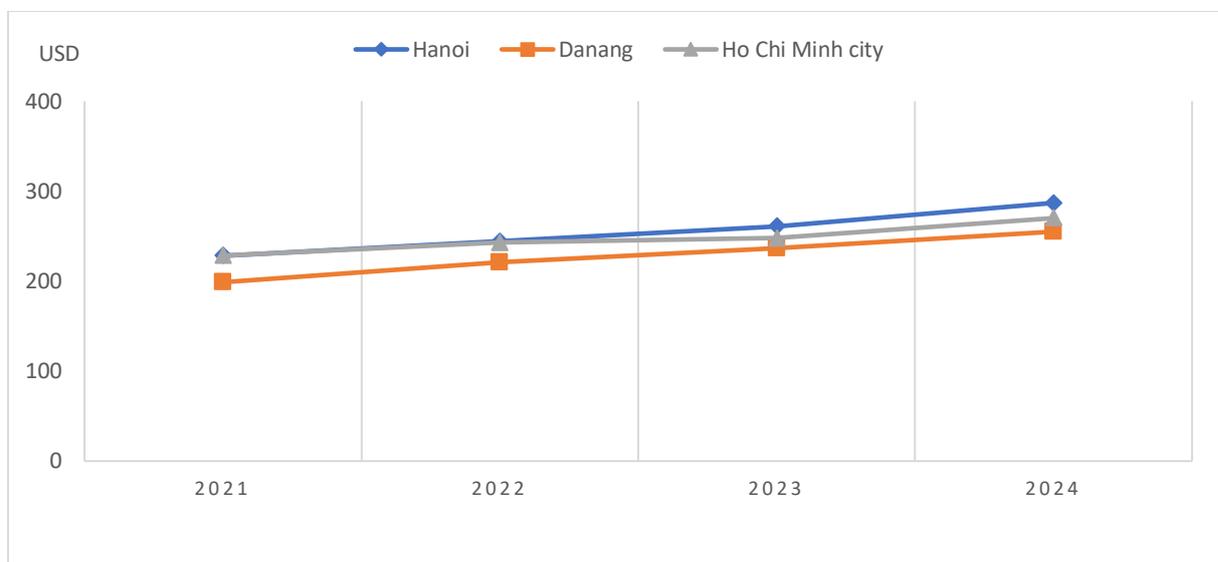


Fig. 2 Average monthly income of workers by socio-economic region, period 2021–2024

However, these income gains have not kept pace with the sharp and sustained escalation in housing prices. According to CBRE's market report, as of Q4/2024, the average selling price of apartments in Hanoi reached approximately USD 3,000/m²—representing a 36% year-on-year increase and a 12% rise from the previous quarter. In Ho Chi Minh City, average primary market apartment prices reached USD 3,167/m², indicating a 24% increase compared to the same period in 2023. Similarly, in Da Nang, average prices stood at USD 3,040/m² for apartments and USD 2,318/m² for landed residential properties. These values reflect a persistent upward trend in housing prices across major urban centres from 2020 to 2024 [9], [10], [11]. The widening disparity between stagnant or modest wage growth and the rapid appreciation of real estate values has rendered homeownership increasingly unaffordable for the majority of low-income earners. Without access to subsidised credit or familial support, an average worker would need to allocate their entire income over 35 to 40 years to afford a standard 50 m² apartment. These data are summarised in Table 1.

Table 1 Housing market data in 2024

Type	Apartments			Landed Properties		
	Hanoi	Da Nang	Ho Chi Minh	Hanoi	Da Nang	Ho Chi Minh
Primary Market Price	\$3,000/m ²	\$3,040/m ²	\$3,167/m ²	\$9,167/m ²	\$2,318/m ²	\$12,917/m ²
	▲36% from 2023	▲20% from 2023	▲24% from 2023	▲19% from 2023	▲9% from 2023	▲13% from 2023

Despite the government's prioritisation of SH as a policy tool to improve housing affordability, the sector continues to face systemic constraints. The limited effectiveness of existing SH initiatives highlights the urgent need for a more rigorous examination of the multidimensional barriers impeding sustainable development within this domain. While previous studies have touched upon issues such as financing mechanisms, legal frameworks, and urban inequality, there remains a significant gap in the literature regarding the integrated analysis of the social, economic, and environmental dimensions of SH in Vietnam—dimensions that are vital to the realisation of SDG 11 and the country's broader Net Zero Carbon Building (NZCB) 2050 Strategy.

Accordingly, this study seeks to bridge this gap by systematically identifying and analysing twenty interrelated barriers that constrain the sustainable development of SH in Vietnam. These barriers are categorised into seven thematic clusters, encompassing institutional, financial, regulatory, social, and environmental factors. The research adopts a multidisciplinary lens to explore these challenges holistically, thereby contributing to a more comprehensive understanding of system-level bottlenecks. Furthermore, the findings offer critical insights for monitoring progress under SDGs, and provide actionable policy recommendations aimed at aligning national housing strategies with global sustainability imperatives.

2. Literature Review

Social housing plays a pivotal role in realising SDG 11, which aims to make cities inclusive, safe, resilient, and sustainable. Specifically, Target 11.1 emphasises ensuring access for all to adequate, safe, and affordable housing by 2030. In rapidly urbanising contexts like Vietnam, SH is not merely a policy solution to housing shortages but a strategic instrument to promote urban equity and resilience.

Global research has long acknowledged the importance of SH in addressing housing inequality in urban areas [12], [13]. However, most of these studies tend to focus on fragmented aspects such as affordability models [14] or housing finance mechanisms, or institutional governance [15], without encompassing a holistic view of sustainability that spans economic, social, and environmental dimensions.

In the Southeast Asian context, SH-related research has gained traction, albeit in a fragmented and uneven manner. For example, studies have examined affordability thresholds and regulatory mechanisms [16], yet many remain city-specific and neglect cross-regional dynamics. A notable contribution is the comparative study by Nguyen and Hoang in 2025, which benchmarks Vietnam's SH programmes against those in Indonesia, Thailand, and the Philippines. Their findings suggest that Vietnam lags in integrating green infrastructure and long-term social sustainability indicators into policy frameworks [17].

In Vietnam, domestic research has gradually expanded from a narrow focus on shelter provision toward broader urban development strategies. Recent works [18], [19], [20] have examined legal mechanisms, affordability indices, and spatial planning. However, few have addressed the persistent issue of financial access barriers, particularly in the context of informal labour. Ha Hong Nguyen provided empirical evidence showing that many prospective SH buyers are unable to secure mortgage loans due to rigid collateral requirements, income verification issues, and limited access to subsidised credit facilities [21]. This aligns with international evidence from similar developing contexts, where bank credit access is often a critical bottleneck in affordable housing uptake.

Moreover, the literature often overlooks regional disparities in SH implementation. For instance, in 2024, Quynh To Thi Huong et al. conducted a case study in Bac Ninh province, identifying key implementation barriers such as delays in site clearance, limited developer incentives, and insufficient oversight of post-occupancy conditions [22]. These findings underline the fragmented nature of SH governance across provinces and provide valuable context for this study's broader national analysis.

Environmental sustainability, a crucial pillar of SDG-aligned housing, is still emerging in Vietnam's SH discourse. The 2025 seminar by the Institute of Building Science and Technology (IBST) introduced the concept of "Green Social Housing", with pilot projects in Da Nang and Ho Chi Minh City incorporating energy-efficient design, passive cooling, and low-carbon construction materials [23]. However, these initiatives remain limited in scale and lack comprehensive integration into national housing policy.

Overall, despite the growing volume of SH-related literature, a systematic barrier-based analysis aligned with the SDG 11 framework and Vietnam's NZCB 2050 objectives is still lacking. While several studies have hinted at regulatory fragmentation, inadequate financial incentives, and institutional inefficiencies, a holistic synthesis that links these barriers to broader sustainability metrics remains underdeveloped. Therefore, this research aims to fill this gap by mapping and categorising systemic barriers to SH development in Vietnam through a sustainability lens. It contributes to advancing the knowledge base on SH policy and implementation, aligning with both national housing strategies and international development goals.

3. Methodology

The research is guided by a structured and methodologically rigorous framework designed to explore and advance strategies for the sustainable development of SH stock in Vietnam. This framework is constructed to align with the national objective of delivering one million SH units by 2030 and to contribute meaningfully to the attainment of SDG 11 concerning inclusive, safe, resilient, and sustainable urban environments.

The framework is organised into six sequential phases (Figure 3). It commences with the identification of the research problem, which delineates the pressing need to reconcile the growing demand for SH with principles of long-term sustainability in Vietnam's urban development trajectory.

Subsequently, a comprehensive literature review is undertaken to synthesise existing scholarly and policy-related discourse on sustainable SH development, both within Vietnam and in comparable international contexts. This stage establishes the conceptual foundations and identifies prevailing knowledge gaps.

The third phase involves an empirical assessment of the current status of SH stock development in Vietnam, examining the availability of housing units, projected demand, and government-defined development targets. This evaluation provides a critical baseline against which gaps in delivery and policy implementation can be measured.

The fourth stage focuses on identifying key barriers to sustainable SH development, structured around the three pillars of sustainability: social, economic, and environmental dimensions. Based on a systematic process of literature review, comparative analysis, and contextual adaptation, 20 key barriers were selected. These barriers were refined to reflect the specific socio-economic conditions and institutional context of Vietnam, ensuring their relevance and applicability to the local housing development landscape. This diagnostic analysis elucidates the systemic and structural constraints impeding progress, such as policy fragmentation, limited financial instruments, land access issues, and inadequate environmental safeguards.

Building on this analysis, the fifth stage proposes strategic directions for promoting sustainable SH in Vietnam. These recommendations are context-sensitive and oriented towards enhancing institutional coordination, improving financing mechanisms, and embedding sustainability criteria across planning, procurement, and construction processes.

The final phase entails a discussion of key findings, drawing out the broader implications for policy and practice, and setting an agenda for future research. Collectively, this framework facilitates a comprehensive, evidence-based exploration of the multifaceted challenges and opportunities surrounding sustainable SH in Vietnam.

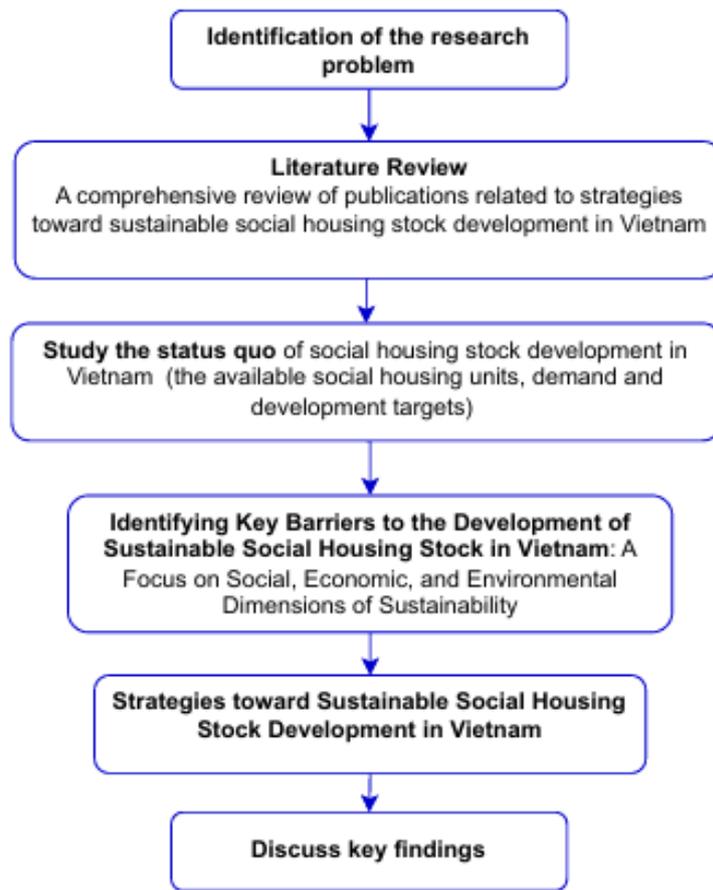


Fig. 3 Research framework

4. Status Quo of Social Housing Stock Development in Vietnam

The development of SH in Vietnam has become an increasingly pressing issue amid rapid urbanization, population growth, and widening income disparities. Over the past decade, the Vietnamese government has introduced various policies to expand the SH stock, aiming to address the growing housing needs of low- and middle-income groups, especially in major urban centers and industrial zones. However, despite some progress, the scale and quality of SH development remain inadequate relative to demand. This section provides an overview of the current status of SH development in Vietnam based on recent data and national planning targets.

4.1. Social Housing Development in Northern Vietnam

The data on SH implementation and targets across 25 provinces and cities in the north region for the 2022–2030 period reveals significant disparities in planning and execution capacity in Table 2. These differences reflect variations in financial resources, urban development priorities, and institutional readiness. In particular, provinces such as Bac Ninh (23,326 units) and Hanoi (28,357 units) have a relatively high amount of built housing, but due to their large population size and rapid urbanisation, future demand is still very high, reaching 128,327 units and 136,000 units, respectively. However, Bac Ninh's meeting rate is only 56.26%, and Hanoi's is only 41.32%, reflecting a serious shortage of supply in the future if there are no adjustments in policies and investments.

Some localities, such as Bac Giang, Hung Yen, Phu Tho, Hai Duong, Hoa Binh, and Ninh Binh, have shown good efficiency in setting and implementing targets, with response rates ranging from 73.9% to nearly 75%. This shows a reasonable balance between development targets and implementation capabilities in localities with average population and urban areas. Meanwhile, provinces such as Ha Nam (17.33%), Lao Cai (28.53%), Thai Binh (33.80%), and Vinh Phuc (33.69%) show very low response rates compared to forecasted demand, indicating great pressure in planning and mobilizing resources for SH development. Quang Ninh stands out with a meeting rate of only 4.86%, showing that the set target (18,000 units) is almost disproportionate to the actual demand (37,000 units), or has not been properly adjusted in the local development strategy.

Table 2 Social housing availability, demand, and development goals in Northern Vietnam, 2021–2030

No.	Province/City	Implementation results for the period 2011-2021 (units)	Demand for the period 2022-2030 (units)	Target (units)			Meeting rate (%)
				Total	Period 2022-2025	Period 2026-2030	
1	Bac Giang	2054	99929	74900	33200	41700	74.95%
2	Bac Ninh	23326	128327	72200	30700	41500	56.26%
3	Hanoi	28357	136000	56200	18700	37500	41.32%
4	Hung Yen	1606	56700	42500	13500	29400	74.96%
5	Hai Phong	938	52700	33500	15400	18100	63.57%
6	Vinh Phuc	3301	84000	28300	8800	19500	33.69%
7	Thai Nguyen	4655	33945	24200	8800	15400	71.29%
8	Phu Tho	3322	29690	22200	7000	15200	74.77%
9	Hai Duong	3920	21226	15900	5800	10100	74.91%
10	Hoa Binh	500	18540	13900	5300	8600	74.97%
11	Ha Nam	511	71533	12400	3900	8500	17.33%
12	Nam Dinh	421	16159	9800	3400	6400	60.65%
13	Lao Cai	556	26640	7600	3200	4400	28.53%
14	Thai Binh	2641	17750	6000	2300	3700	33.80%
15	Son La	0	7903	4000	1400	2600	50.61%
16	Ninh Binh	0	4195	3100	2300	800	73.90%
17	Lang Son	164	4000	3000	1500	1500	75.00%
18	Quang Ninh	1280	37000	1800	8200	9800	4.86%
19	Lai Chau	0	0	1500	400	1100	
20	Dien Bien	84	0	1500	400	1100	
21	Cao Bang	0	0	1500	400	1100	
22	Ha Giang	0	0	1500	400	1100	
23	Tuyen Quang	0	4572	1500	400	1100	32.81%
24	Yen Bai	0	1000	700	200	500	70.00%
25	Bac Kan	0	800	600	200	400	75.00%

Figure 4 presents data from six provinces and cities with the highest SH development targets in Northern Vietnam, including Bac Giang, Bac Ninh, Hanoi, Hung Yen, Hai Phong, and Vinh Phuc. The results indicate that the SH targets set for 2030 in most of these localities are significantly lower than the projected demand for the same period. Notably, in Hanoi — the locality with the highest demand of 136,000 units — the target is only 56,200 units, meeting approximately 41% of the projected need. The substantial gap between demand and development targets highlights the major challenges that local governments face in meeting the housing needs of low-income earners and industrial park workers. This situation underscores the urgent need to review current development plans and enhance policies, mechanisms, and resource mobilization to ensure the effective implementation of social welfare objectives in the coming years.

Overall, the average target completion rate across provinces in the Northern region remains modest, with most falling in the 50–55% range. This suggests that stronger government support, clearer planning mechanisms, and enhanced incentives for private sector participation are needed to ensure that the national SH development targets for 2030 are achieved.

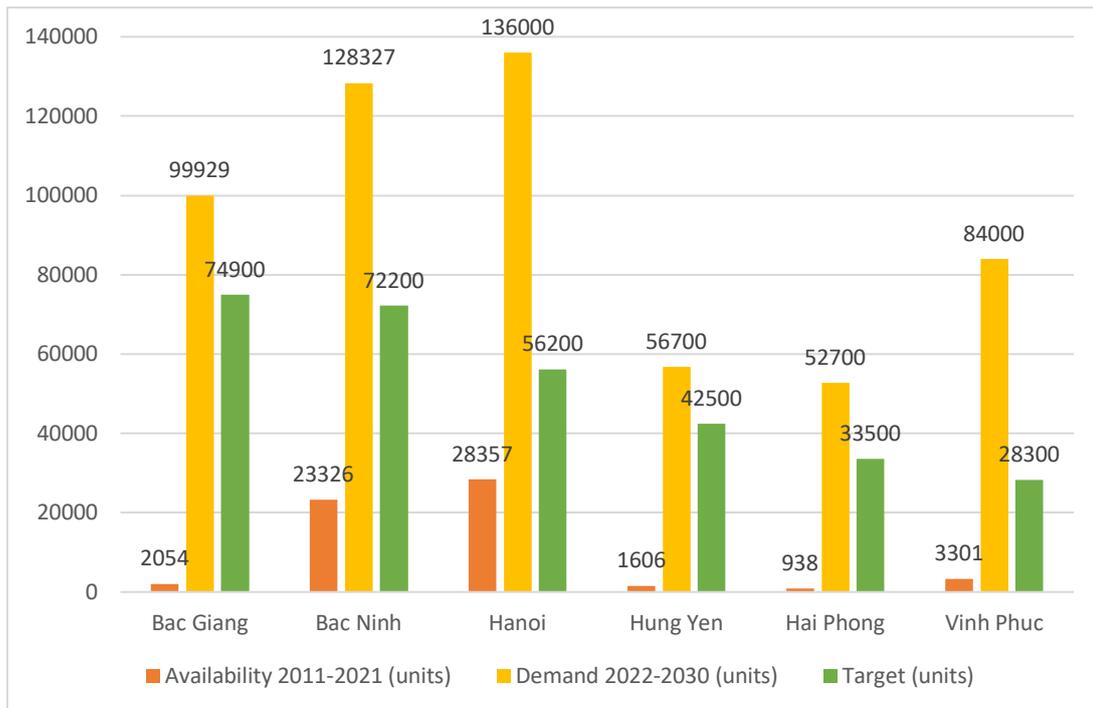


Fig. 4 Summary of availability, demand, and development targets for social housing for low-income people and industrial park workers in selected cities in Northern Vietnam

4.2. Social Housing Development in Central Vietnam

During the 2011–2021 period, several provinces in the Central and Central Highlands regions showed limited implementation results for SH development, with some localities such as Phu Yen, Quang Tri, Gia Lai, and Kon Tum reporting no significant activity. The demand for SH from 2022 to 2030 varies significantly, ranging from as low as 2,980 units in Lam Dong to as high as 77,750 units in Nghe An, reflecting wide disparities in urbanization levels and population needs.

The set targets for this period also vary across provinces. Nghe An—the province with the highest demand—set a target of only 28,500 units, meeting just 36.66% of projected needs. In contrast, provinces such as Binh Thuan (75.38%), Quang Ngai (75%), and Dak Nong (75%) show higher target achievement rates, despite lower overall demand. Several provinces achieved high meeting rates (above 74%), including Binh Dinh (74.55%), Da Nang (74.23%), Khanh Hoa (74.13%), and Thua Thien Hue (74.90%). However, others, such as Quang Binh (21.66%), Gia Lai (40.66%), and Kon Tum (48.94%), exhibited significant gaps between demand and planned targets, highlighting implementation challenges. Notably, some provinces with relatively high demand, such as Dak Lak (25,158 units) and Phu Yen (26,224 units), have set modest targets of 18,800 and 19,600 units, respectively. Dak Lak, in particular, shows an uneven allocation of targets between sub-periods—only 900 units planned for 2022–2025, compared to 17,900 for 2026–2030, indicating a strategic focus on the latter period. This information is summarized in Table 3.

Table 3 Social housing availability, demand, and development goals in Central Vietnam, 2021–2030

No.	Province/City	Implementation results for the period 2011-2021 (units)	Demand for the period 2022-2030 (units)	Target (units)			Meeting rate (%)
				Total	Period 2022-2025	Period 2026-2030	
1	Nghe An	1381	77750	28500	13500	15000	36,66%
2	Quang Nam	980	26179	19600	14700	4900	74,87%
3	Phu Yen	0	26224	19600	11800	7800	74,74%
4	Dak Lak	710	25158	18800	900	17900	74,73%
5	Quang Binh	67	69250	15000	3700	11300	21,66%
6	Thanh Hoa	6381	18383	13700	6300	7400	74,53%
7	Binh Dinh	1838	17304	12900	6400	6500	74,55%
8	Da Nang	3729	17244	12800	6400	6400	74,23%
9	Binh Thuan	306	13000	9800	5600	4300	75,38%
10	Quang Tri	0	12590	9100	2300	6800	72,28%
11	Khanh Hoa	1465	10522	7800	3400	4400	74,13%
12	Thua Thien Hue	1242	10280	7700	3100	4600	74,90%
13	Ninh Thuan	37	8700	6500	1300	5200	74,71%
14	Quang Ngai	96	8400	6300	1500	4800	75%
15	Ha Tinh	3762	5000	3700	1500	2200	74%
16	Gia Lai	0	9100	3700	1500	2200	40,66%
17	Dak Nong	164	4000	3000	1500	1500	75%
18	Kon Tum	0	4495	2200	1200	1000	48,94%
19	Lam Dong	304	2980	2200	800	1400	73,83%

In the 19 provinces and cities of the Central region, the authors selected the 5 localities with the highest SH development targets and illustrated them in Figure 5. Overall, the demand for SH in these localities during the 2022–2030 period is very high, ranging from approximately 19,600 to over 77,000 units, with Nghe An and Quang Binh having the highest demand. However, the actual supply during the 2011–2021 period remains very limited, mostly below 2,000 units. Notably, no completed SH projects were recorded in Phu Yen, and Quang Binh had only 67 units. The SH development targets set for 2030 are also significantly lower than the projected demand, with the target fulfillment rate generally below 40%. This indicates a severe imbalance between supply and demand for SH in the Central region, highlighting the urgent need to improve planning efficiency, allocate funding appropriately, and enhance supportive policies for SH development to ensure social security for low-income people and industrial workers in the coming years.

Overall, the target-to-demand fulfillment rate across this region remains limited, with most provinces aiming to meet only around 70–75% of their projected needs. Local governments are encouraged to reassess implementation capacities, financial resources, land availability, and policy mechanisms to ensure effective achievement of SH development goals for the 2022–2030 period.

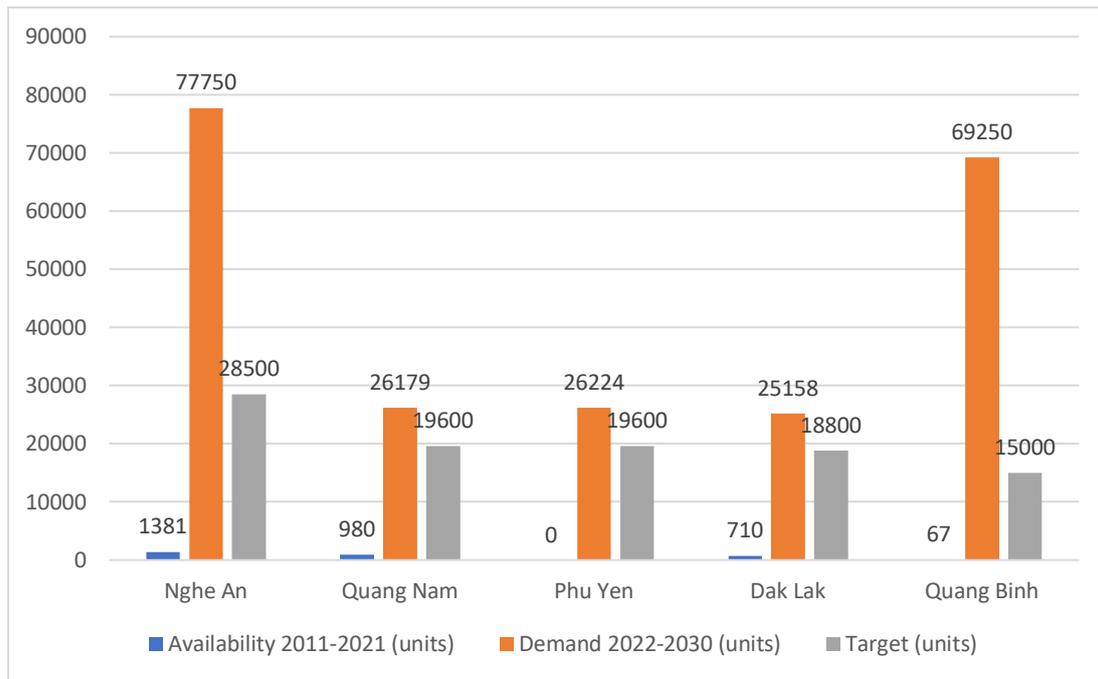


Fig. 5 Summary of availability, demand, and development targets for social housing for low-income people and industrial park workers in selected cities in Central Vietnam

4.3. Social Housing Development in the Southern Vietnam

The period from 2022 to 2030 is expected to witness a significant surge in demand for SH across the southern provinces of Vietnam, with total demand markedly surpassing the projected supply capacity. A critical indicator of each locality's ability to meet this demand lies in the volume of SH units completed during the previous decade (2011–2021),

Ho Chi Minh City, despite registering the highest demand in the region (345,388 units), had the most substantial implementation record in the preceding period with 21,205 completed units. Similarly, Long An province, with a modest foundation of 2,601 units built during 2011–2021, faces an overwhelming projected demand of 310,000 units. Its target of 71,200 units yields a comparably low response rate of 22.97%, highlighting significant challenges in scaling up. Conversely, provinces such as Binh Phuoc and Soc Trang, which had no prior development in SH (zero units constructed in 2011–2021), have targets of 44,200 and 6,400 units, respectively. Notably, Binh Phuoc's response rate of 52.31% suggests a proactive approach and significant policy mobilization despite lacking an initial infrastructure base. Binh Duong stands out as a model of effective and sustainable SH development. With 9,076 units completed in the previous period and a target of 86,900 units, the province achieves a response rate of 75.02%, demonstrating high implementation capacity and strong institutional commitment to housing development. In contrast, several provinces with both limited past performance and low planned targets—such as Hau Giang (13.75%), Kien Giang (14.62%), and Bac Lieu (15.08%)—are falling significantly short of their respective demand levels. Despite having initiated some housing projects in the 2011–2021 period, their inability to scale targets reflects persistent structural constraints and insufficient investment mechanisms. However, other provinces such as An Giang, Tra Vinh, Tay Ninh, and Ben Tre have demonstrated more balanced planning, with response rates exceeding 74%. These provinces exhibit more coherent alignment between past performance, projected demand, and planned targets, suggesting more effective local housing policies and planning mechanisms.

The analysis reveals a marked imbalance between SH demand and supply across most southern provinces of Vietnam. While a few localities have demonstrated strategic planning and strong implementation capacity, the majority remain significantly underprepared to meet future needs.

Table 4 Social housing availability, demand, and development goals in Southern Vietnam, 2021–2030

No.	Province/City	Implementation results for the period 2011-2021 (units)	Demand for the period 2022-2030 (units)	Target (units)			Meeting rate (%)
				Total	Period 2022-2025	Period 2026-2030	
1	Binh Duong	9076	115836	86900	46400	40500	75,02%
2	Long An	2601	310000	71200	22500	48700	22,97%
3	Ho Chi Minh City	21205	345388	69700	26200	43500	20,18%
4	Binh Phuoc	0	84489	44200	10900	33300	52,31%
5	Tra Vinh	134	37256	27900	8900	19000	74,89%
6	Dong Nai	7275	152008	22500	7500	15000	14,8%
7	Ba Ria - Vung Tau	5224	16629	12500	6200	6300	75,17%
8	Tay Ninh	1639	15940	11900	5000	6900	74,65%
9	Can Tho	416	12715	9100	4100	5000	71,57%
10	Tien Giang	716	40834	7800	3100	4700	19,1%
11	Soc Trang	0	8500	6400	2600	3800	75,29%
12	An Giang	440	8400	6300	2500	3800	75%
13	Dong Thap	652	16395	6100	2800	3300	37,21%
14	Vinh Long	335	13776	5900	2300	3600	42,83%
15	Ben Tre	456	6287	4700	1700	3000	74,76%
16	Kien Giang	403	23932	3500	1700	1800	14,62%
17	Ca Mau	1673	14974	2900	1100	1800	19,37%
18	Bac Lieu	1859	12601	1900	900	1000	15,08%
19	Hau Giang	1796	10181	1400	700	700	13,75%

Figure 6 highlights the six leading provinces and cities in Southern Vietnam in terms of future SH targets. At the top are Ho Chi Minh City (345,388 units) and Long An (310,000 units). However, the current supply and development targets up to 2030 fall significantly short of meeting the projected demand. Both Ho Chi Minh City and Long An are experiencing severe shortages, with development targets only meeting about 20–25% of the demand. Binh Phuoc has no recorded SH units as of 2021, despite having a projected demand of over 84,000 units. Provinces with smaller populations, such as Tra Vinh and Dong Nai, also show substantial gaps between supply, demand, and targets. Only Binh Duong stands out as having a surplus, with 115,836 units completed compared to a projected demand of 86,900 units.

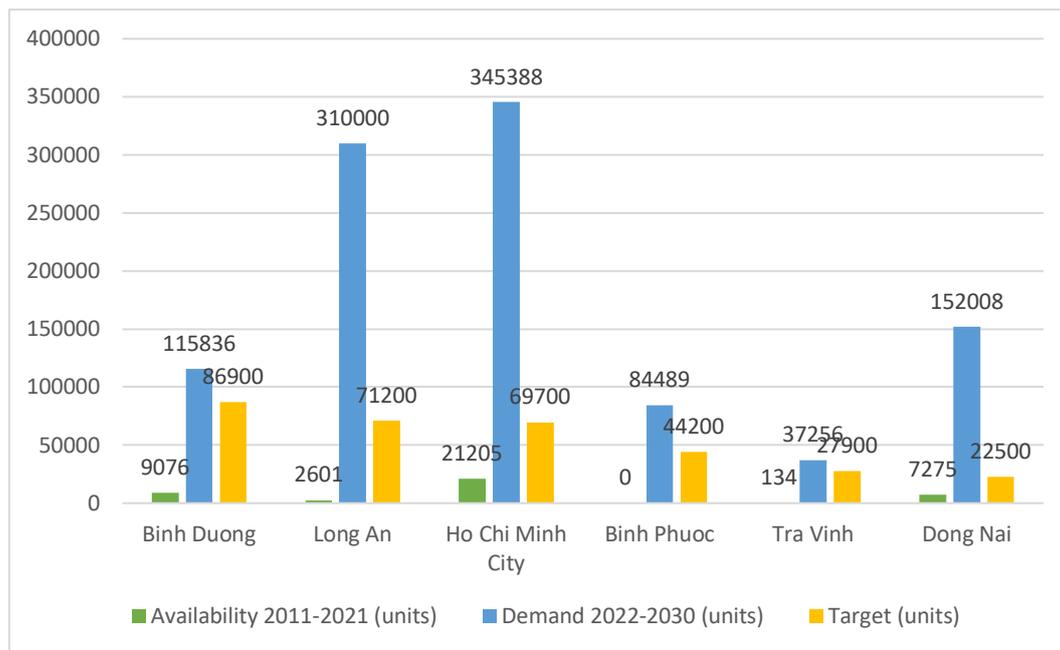


Fig. 6 Summary of availability, demand, and development targets for social housing for low-income people and industrial park workers in selected cities in Southern Vietnam

The shortage and imbalance in the development of SH in Vietnam stem from a range of barriers, including institutional constraints, planning inefficiencies, and limited implementation resources. One of the primary challenges lies in insufficient land allocation for SH projects, particularly in major urban areas such as the Southeast region and the Red River Delta. In these localities, the pressure to prioritize commercial and infrastructure developments has significantly reduced the availability of clean land for SH construction.

In addition, SH planning in many provinces and cities is not closely aligned with overall urban development plans, leading to a lack of synchronized technical and social infrastructure. This misalignment results in project delays and hinders the long-term sustainability of SH developments. Furthermore, while policies on credit incentives, tax reductions, and land use fee exemptions for SH have been introduced, their implementation remains inconsistent across localities. Procedural bottlenecks persist, and the incentives provided are still insufficient to attract significant private sector engagement. Funding remains a major constraint, as the preferential credit system is underdeveloped, and low-income households face difficulties in accessing housing loans.

Notably, private sector participation in SH remains limited due to concerns over low profit margins and long payback periods. At the same time, public-private partnership (PPP) mechanisms have yet to demonstrate clear effectiveness, failing to provide sufficient confidence or incentives for businesses to invest. Another challenge is the uneven management capacity and prioritization of SH across provinces and cities. Many local governments lack the commitment and capacity to implement SH programs effectively, while major urban centers—where demand is most urgent—often receive inadequate support and resources.

All of these barriers collectively contribute to an unsustainable SH development landscape in Vietnam. Timely and coordinated interventions are urgently needed to overcome these challenges, ensure social welfare, and advance the country's sustainable development goals.

5. Barriers in Social Housing Stock Development Toward Sustainable Development Goals in Vietnam

In Vietnam, although the government has made strong commitments to achieving the Sustainable Development Goals amid increasing urbanization, the development of SH still faces numerous challenges. Drawing from studies conducted worldwide, the research team has identified and selected 20 key barriers related to the three pillars of sustainability—social, economic, and environmental—that affect the sustainable development of SH in Vietnam. Recognizing these challenges will enable policymakers and stakeholders to design appropriate solutions that promote sustainable SH development, thereby effectively advancing the achievement of the SDGs, particularly SDG 11 on sustainable and inclusive urban development.

5.1. Social Sustainability

Social sustainability is one of the three pillars of sustainable development, focusing on maintaining and improving human quality of life in the long term. It involves social equity, human rights, access to basic services (such as education, healthcare, and housing), cultural preservation, and community cohesion. Achieving social sustainability in SH development faces several barriers.

For example, various studies have highlighted the crucial role of end-users in implementing SH models. A study [24], [25] in the United States confirmed that income inequality significantly impacts the ability of low-income households to afford rental housing. Another study [26], [27], [28] using the Delphi method, identified a lack of awareness and knowledge as the third-ranked barrier to SH implementation. Besides that, [29], [30] discussed community opposition to affordable housing developments in Sydney.

Financial barriers have also been identified. Studies [31], [28], and [32] pointed out two key financial challenges: difficulties in accessing mortgage loans for home purchases and the inefficiency of financial institutions. Regarding project management, studies [32], [33] assessed the approval process as complex and time-consuming, hindering the efficient development of SH. Studies [30], [34] emphasized that ineffective project management processes lead to lower final product quality, construction delays, and increased costs, making SH projects less efficient.

To evaluate labor-related barriers, [28], [30] concluded that human resource factors are essential as they influence all other project activities in achieving sustainability goals. Studies [27], [30], [32], [35], [36] also examined institutional and land-use policy barriers, highlighting the lack of effective land-use planning policies that limit land accessibility. Finally, a critical factor determining the success of SH models, mentioned in studies [32], [37], [38], is the involvement of the private sector. These authors confirmed that private sector participation in SH development remains underutilized.

The social barriers in SH development outlined above fully reflect the current reality in Vietnam. Income inequality and disparities in living standards among different population groups have increased the demand for SH, yet access for low-income households remains limited. Many families in major cities such as Hanoi and Ho Chi Minh City are unable to access SH projects due to a lack of information, complicated procedures, and strict eligibility criteria.

A significant obstacle, similar to findings in international studies, is the lack of awareness and knowledge about sustainable SH models among both residents and local government authorities. Additionally, the phenomenon of “NIMBY” (Not In My Backyard)—community opposition to affordable housing projects—has also emerged in several new urban areas in Vietnam.

Regarding financial and project management aspects, access to loans—especially from formal financial institutions—is still challenging due to the unstable incomes of low-wage workers. Lengthy approval processes, lack of transparency, and poor inter-agency coordination have further increased costs and delayed SH project implementation.

Finally, with the increasingly limited urban land fund, unclear and non-transparent land-use planning policies have hindered many SH projects from progressing. The limited participation of the private sector in this field reflects the absence of effective mechanisms to attract private investment.

5.2. Economic Sustainability

Economic Sustainability focuses on ensuring stable economic growth, promoting overall well-being, without causing harm to the environment and society. Through the analysis and evaluation of various studies, several economic barriers have been identified and summarized by the authors as follows:

In the study [39], [40] by A. Sourani and M. Sohail, up to 75% of interviewees mentioned the barrier of insufficient funding from the state budget. Additionally, high land prices, even with government support, have made SH projects less attractive to businesses, as highlighted in the study [32]. Publications [41] indicate that private sector investment in SH has remained relatively low despite numerous financial incentives provided by the government.

Studies [12], [42], [43] conducted in developing countries mention the barrier of price fluctuations and inflation, identifying it as a key cause of project delays. Moreover, other financial obstacles such as strict credit conditions and procedures, high levels of bad debt, and an inability to repay loans are also cited as barriers in studies [31], [44].

In Vietnam, the state budget allocated for SH development remains modest and insufficient to meet the rapidly growing demand in densely populated urban areas. The lack of public investment capital has limited the scale and pace of SH project implementation, especially amid rising land and construction material costs. Furthermore, land prices in major cities such as Hanoi and Ho Chi Minh City are excessively high. Despite government support policies, these high costs continue to make SH projects unattractive to private investors.

Many enterprises are concerned about low profit margins, high financial risks, and long capital recovery periods. Additionally, inflation and fluctuations in the prices of raw materials have caused delays in the

construction progress of SH projects. The financial system in Vietnam also reveals weaknesses, characterized by stringent credit conditions, high interest rates, and an increasing volume of bad debt in the real estate sector. These factors negatively affect both developers' and homebuyers' access to capital.

5.3. Environmental Sustainability

Environmental Sustainability focuses on protecting natural resources, minimizing negative environmental impacts, and maintaining ecosystems for present and future generations. In the construction sector, environmental sustainability revolves around solutions such as using sustainable building materials and green construction technologies, designing energy-efficient buildings, developing green spaces, and protecting natural water sources.

Studies [42], [45] highlight that implementing new technologies requires significant financial investment from both governments and businesses. Furthermore, the limited availability of certifications for energy efficiency and green buildings, particularly in developing countries, acts as a barrier to environmental sustainability [40]. Additionally, a key obstacle to the effective implementation of SH models is the lack of awareness and knowledge about sustainable SH, as mentioned in the study [45] by Adabre M. and colleagues.

In the context of increasingly severe climate change impacts in Vietnam, especially in coastal urban areas and the Mekong Delta region, the need to develop green and sustainable SH has become urgent. However, the application of green construction technologies and environmentally friendly materials remains very limited, mainly due to high upfront investment costs and the lack of specific government incentive mechanisms.

Moreover, the number of buildings certified for energy efficiency or meeting green standards in Vietnam is still very low. Many developers, particularly small and medium-sized enterprises, lack the knowledge or resources to implement sustainable construction solutions. This situation aligns with the barriers identified in other developing countries.

In Table 7, based on the above analysis, the authors have gathered 20 barriers in implementing the sustainable SH model in Vietnam, belonging to 3 pillars of sustainability: social, economic, and environmental.

Table 7 Barriers to implementing sustainable SH models in Vietnam

Category	Barriers	Source
Social Sustainability Barrier	1. Income inequality among households	[24], [25]
	2. Lack of awareness about maintenance/ renovation of social housing	[26], [27], [28]
	3. Community opposition to affordable housing projects	[29], [30]
	4. Concerns about debt and mortgages	[28], [31]
	5. Delay in Project Approval Procedures	[32] [33]
	6. Inefficient financial institutions	[30], [32]
	7. Weaknesses in project management	[34] [30]
	8. Lack of experts and high-quality human	[28], [30]
	9. Failure to maximize private sector participation	[32], [37], [38]
	10. Limited access to land funds for SH development	[27], [30]
	11. Lack of policies on land use planning for social housing	[30], [35], [36]
Economic Sustainability Barriers	1. Limited state budget	[39], [40]
	2. High land use costs	[30], [32]
	3. Insufficient incentives for private sector	[41]
	4. High inflation, price fluctuation	[30], [42], [43]
	5. Credit conditions and procedures face many obstacles	[31], [44]
	6. Increase in the customer delinquency rate, inability to pay	[31], [44]
Environmental Sustainability Barriers	1. High costs of implementing new technologies	[42], [45]
	2. Lack of awareness, knowledge and experience about sustainable social housing	[45]
	3. Lack of energy efficiency standards for buildings	[40]

6. Strategies for Social Housing Stock Development Toward Sustainable Development Goals in Vietnam

Vietnam has identified the development of SH as a crucial component of its national sustainable development strategy. This initiative aims to meet the housing needs of low-income groups while promoting comprehensive socio-economic development. The advancement of sustainable SH in Vietnam is impeded by a complex interplay of barriers across social, economic, and environmental dimensions. From a social perspective, challenges include pronounced income inequality, insufficient public awareness regarding the maintenance and renovation of SH, community opposition to new developments, apprehensions surrounding debt and mortgage obligations, and protracted project approval procedures. Institutional inefficiencies, limited project management capacity, a shortage of qualified professionals, and the underutilisation of private sector participation further exacerbate these issues. Economically, constraints such as a limited state budget, elevated land use costs, inadequate incentives to attract private investment, high inflation and market volatility, burdensome credit procedures, and elevated rates of payment delinquency undermine the financial feasibility and scalability of SH initiatives. Environmental barriers are also significant, characterised by the high costs associated with the adoption of new technologies, a pervasive lack of knowledge and technical expertise related to sustainable housing, and the absence of binding energy efficiency standards for buildings.

In response to these multidimensional challenges, the study proposes seven strategic directions to facilitate a more sustainable trajectory for SH development. First, the implementation of targeted financial incentives is essential to stimulate investment and support construction activities. Second, the development and enforcement of maintenance and renovation policies will contribute to the longevity and resilience of the existing housing stock. Third, initiatives to promote education and raise public awareness are vital for cultivating societal acceptance and advancing sustainable practices. Fourth, the enhancement of the legal and regulatory framework governing construction, operation, sales, and rental processes is critical for improving institutional effectiveness. Fifth, diversifying investment and management models, particularly through increased private sector engagement, is necessary to expand resource mobilisation. Sixth, dedicated funding for research on sustainable materials and technologies is imperative for fostering innovation and reducing long-term environmental impacts. Finally, the refinement of land-use planning policies will facilitate more efficient land allocation and support integrated urban development. Collectively, these strategic responses offer a comprehensive and context-sensitive framework for overcoming existing barriers and advancing the sustainable development of SH in Vietnam.

In Figure 7, the authors summarize seven strategies to overcome the barriers previously discussed, aiming to implement a sustainable SH model in Vietnam.

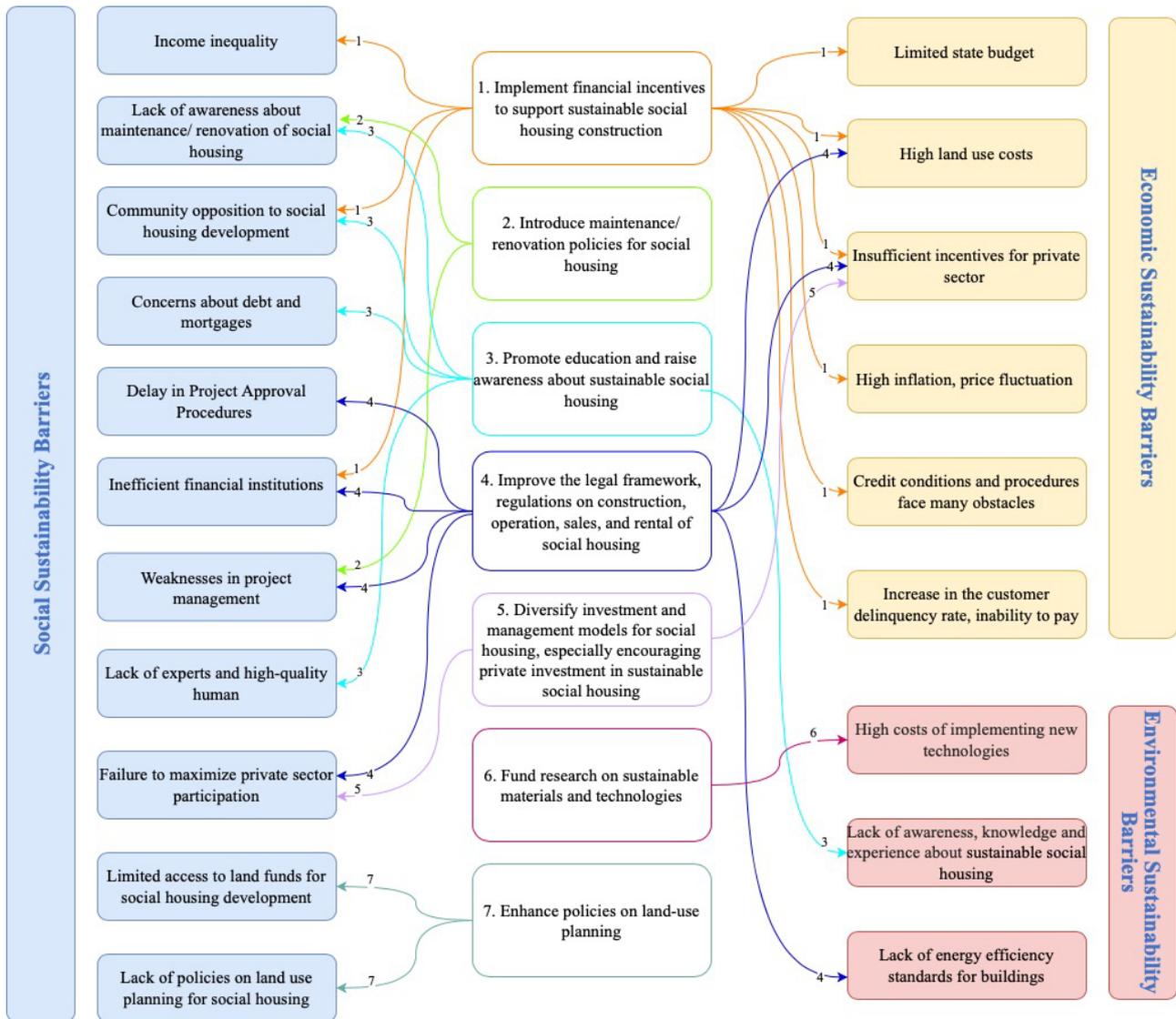


Fig. 7 Strategies for overcoming barriers to implementing sustainable SH models in Vietnam

6.1. Implement Financial Incentives to Support Sustainable Social Housing Construction

To ensure sustainable SH development, Vietnam needs to establish a comprehensive financial incentive system at both the central and local levels. First and foremost, the government should ensure the provision of clean land with basic infrastructure for SH projects to reduce site clearance costs, one of the primary causes of delays and cost overruns. Singapore offers a successful model, where the government directly provides land and infrastructure to the Housing and Development Board (HDB), significantly reducing costs and maintaining affordability [16].

Exempting or reducing land use taxes and corporate income taxes are key fiscal policies adopted by many countries. In South Korea, the "Bogumjari Housing" program introduced tax breaks, infrastructure support, and preferential financing for private developers, significantly expanding the SH supply since 2010 [46]. Similarly, Canada's National Housing Co-Investment Fund allows non-profits and private developers to access low-interest loans and benefit from local property tax exemptions [47].

Vietnam could also learn from Germany's green credit model through the KfW Development Bank. This program provides long-term concessional loans to both developers and homebuyers who meet energy efficiency and low-emission standards [48]. Vietnam's Social Policy Bank could play a similar role by creating specialized credit lines targeting SH projects that meet green and sustainable criteria.

Additionally, it is essential to introduce a point-based reward system where developers actively contributing to SH development are given priority in accessing land for more profitable commercial real estate projects. In the

UK, “Section 106 Agreements” require commercial developers to allocate a certain percentage of units to SH, thereby creating a steady supply and fostering social integration [49].

6.2. Introduce Maintenance/Renovation Policies for Social Housing

A key aspect of sustainable SH development is ensuring the long-term usability and structural integrity of buildings. In Vietnam, however, these activities are often neglected due to a lack of clear regulatory frameworks. Establishing a periodic inspection system every 3–5 years is essential to identify early signs of deterioration.

Maintenance responsibilities should be assigned among the government, developers, and residents. For government-managed SH, the Hong Kong Housing Authority provides a successful model through its Total Maintenance Scheme (TMS), which integrates proactive inspections, timely repairs, and resident engagement [50]. In the United States, the Department of Housing and Urban Development (HUD) employs the Uniform Physical Condition Standards (UPCS) to systematically assess and maintain housing quality [51]. Similarly, green retrofit programs in Germany and the Netherlands have demonstrated significant improvements in energy efficiency and resident well-being [52]. Vietnam should consider adopting similar models to develop a comprehensive legal framework that integrates sustainability into the long-term maintenance of SH.

6.3. Promote Education and Raise Awareness about Sustainable Social Housing

One major obstacle to sustainable SH in Vietnam is the insufficient awareness among residents, businesses, and local authorities regarding sustainability in housing. To overcome this barrier, it is essential to launch community outreach initiatives that educate the public on the benefits of green buildings, resource-efficient living, and the role of SH in equitable urban development.

Examples from abroad support this approach: in Uganda’s Jinja region, local training centers empower over 200 young people to produce climate-friendly construction materials and construct affordable, resilient housing using stabilized earth bricks [53], [54]. In the Czech Republic, the CraftEdu program offers national-level vocational training for craftsmen and construction workers in energy-efficient building techniques, supported by e-learning platforms to ensure consistency and scalability [55].

Concurrently, the Vietnamese government should sponsor specialized training for construction workers, engineers, and project managers in sustainable building techniques, eco-friendly materials, and energy-efficient design. Programs such as Canada’s “Building It Green” empower tradespeople nationwide with climate literacy and green construction skills through accredited union training centers [56]. Similarly, in the UK, initiatives like those at Exeter College and Vaillant’s retraining programs address critical skills gaps for decarbonizing housing and retrofitting [57].

Finally, integrating sustainability modules into vocational training curricula is crucial to fostering a systemic understanding of green principles throughout project lifecycles. Transnational educational models, such as those using Moodle in Europe for training Zero-Energy Building practitioners, combine online platforms with collaborative assessments to ensure technical competence and holistic project management skills [58].

6.4. Improve the Legal Framework and Regulations on Social Housing Construction, Operation, Sales, and Rentals

The current legal framework for SH in Vietnam lacks cohesion, with several unclear provisions that hinder enforcement and oversight.

First, transparent and fair allocation mechanisms must be established. For example, in the UK, the Housing Act 1996 [59] mandates a priority-based system for vulnerable groups, including the homeless, persons with disabilities, and single-parent families. This system operates through a transparent points-based scheme, ensuring equitable distribution.

Second, in terms of pricing, models such as the “Affordable Rent” in the UK or the rent point system in the Netherlands can be adapted. These ensure that SH rent levels remain below 80% of the market rate. In the Netherlands, rents are determined using a national points-based system that considers the apartment’s size, quality, and location [60]. This helps maintain affordability and prevents overpricing, a critical issue in Vietnam’s current system.

Third, regulations on asset repossession must be clearly defined. In Germany and the UK, legal frameworks outline specific conditions under which SH leases can be terminated, such as contract violations, illegal subletting, or income changes. In Germany, the Federal Social Housing Law requires regular income declarations to ensure ongoing eligibility [14]. Vietnam would benefit from adopting similar mechanisms to prevent abuse and policy evasion.

Fourth, to address speculation and illegal resale issues already evident in SH projects in Hanoi and Ho Chi Minh City, regulations should govern occupancy, subletting, transfer, and ownership rights. For instance, in the Netherlands, tenants are prohibited from subletting or selling SH units without prior approval from housing

authorities [61]. Enforcing such restrictions would safeguard the intended purpose of SH stock and prevent market distortion.

These international practices highlight that a well-functioning SH system requires not only financial and infrastructural investment but also a robust legal and institutional framework. By aligning its policies with proven global models, Vietnam can enhance the effectiveness, transparency, and fairness of its SH program, contributing to long-term social equity and sustainable urban development.

6.5. Diversify Investment and Management Models for Social Housing, with a Focus on Encouraging Private Investment

The sustainable development of SH in Vietnam necessitates the diversification of investment and management models, with a particular emphasis on incentivising private sector involvement. Historically, SH development in Vietnam has relied heavily on public sector initiatives, which often suffer from limited financial resources, land availability, and bureaucratic inefficiencies. To overcome these constraints, a more diversified and flexible investment framework must be adopted—one that integrates both public and private capabilities through innovative partnership models.

A cornerstone of this strategy is the implementation of Public–Private Partnerships (PPP), which have proven effective in many countries for delivering infrastructure and public goods. Under this model, the public sector can contribute land and essential infrastructure—often one of the largest cost burdens in SH development—while the private sector assumes responsibilities for design, construction, and long-term facility management. This risk-sharing mechanism optimises project performance by leveraging private capital and efficiency while maintaining public oversight to ensure alignment with social objectives [62]. For instance, the United Kingdom's Private Finance Initiative and Singapore's Housing and Development Board (HDB) collaborations with private contractors offer successful PPP models that combine public land ownership with private development expertise [16].

Beyond PPP, Build–Own–Operate (BOO) and Build–Own–Lease (BOL) models can further expand the investment landscape. The BOO model allows private developers to retain ownership and operation rights over SH units, particularly suited for housing industrial workers in economic zones and industrial parks where demand is stable and continuous. By ensuring long-term rental income streams, this model provides financial sustainability to investors while meeting labor housing demands. Examples from China's urban village renewal projects demonstrate how such models can be adapted to serve migrant worker populations through private-led affordable rental housing schemes [63].

Diversifying investment models not only allows stakeholders to choose approaches suited to their financial capacity and strategic orientation but also fosters innovation in housing design, construction technology, and maintenance practices. Moreover, tailored models encourage regional flexibility, addressing the distinct socio-economic conditions of provinces and cities across Vietnam. By learning from international best practices and tailoring them to local contexts, Vietnam can mobilize broader financial resources, improve housing delivery efficiency, and ensure that SH meets the needs of a growing and diverse population, thereby advancing national goals of social equity and urban sustainability.

6.6. Fund Research on Sustainable Materials and Technologies

Promoting sustainable development in SH requires significant investments in research and innovation, particularly in green materials, energy-efficient technologies, and circular construction processes. As Vietnam accelerates its efforts toward achieving both its social equity goals and environmental commitments under the SDGs and the Paris Agreement, establishing a national research fund dedicated to sustainable construction becomes imperative. Such a fund should prioritize research and development (R&D) of eco-friendly building materials, low-carbon construction methods, and climate-resilient technologies adapted to Vietnam's diverse climatic zones.

Vietnam holds considerable potential for innovating and applying environmentally sustainable building materials. Among the most promising are recycled and low-emission alternatives to traditional materials, including bricks made from plastic waste, recycled wood products, and recycled concrete. Several innovative materials have already been successfully developed within the country. For example, gypsum-based interior mortar, which can replace conventional cement mortar, has demonstrated the potential to reduce CO₂ emissions by up to 75% due to its low embodied carbon and simplified production. Similarly, glass produced from hydraulic raw materials has been shown to reduce direct CO₂ emissions by approximately 70% compared to traditional glass manufacturing. Additionally, aerated lightweight concrete (ALC) developed in Vietnam utilizes a one-step mixing process that eliminates the need for foaming machines, thereby reducing costs and energy consumption while also minimizing the use of cement and natural sand—factors that significantly lower carbon emissions and enhance ecological performance [64]. However, despite these advancements, the lack of a formal green certification framework tailored for the SH sector in Vietnam remains a critical barrier. Without clearly defined sustainability standards or incentive mechanisms for SH projects, these innovative materials have predominantly been applied

in commercial or private-sector real estate developments, where environmental performance expectations and economic returns are more strongly aligned. Therefore, establishing a green certification system specific to social housing—ideally supported by national policy and financial tools—is essential for mainstreaming these materials in the affordable housing segment.

International experience underscores the central role of R&D funding in accelerating green innovation. For instance, the European Union's Horizon Europe program has significantly contributed to the development and deployment of innovative materials like bio-concrete, recycled plastic composites, and phase-change materials for thermal regulation in buildings [65]. Vietnam can adopt similar approaches by establishing public-private research partnerships and earmarking government funding specifically for sustainable housing innovation.

Incentivizing enterprises to engage in R&D is another vital strategy. Policies that offer tax exemptions, research grants, or matching funds for companies investing in green technology can stimulate private sector innovation. This aligns with the OECD's recommendations, which emphasize fiscal incentives as effective tools to reduce the risks associated with green technology investment [66]. In Vietnam, such incentives should be coupled with regulatory support—such as expedited licensing or recognition programs—for SH projects that integrate locally developed green technologies.

Collaboration with international organizations such as the United Nations Development Programme (UNDP), the World Bank, and the Asian Development Bank (ADB) will further strengthen Vietnam's capacity. These institutions not only provide financial support but also offer access to global knowledge networks, capacity-building programs, and best practices in sustainable construction. For instance, the World Bank's EDGE (Excellence in Design for Greater Efficiencies) [67] program promotes cost-effective strategies for green building in emerging markets and could be localized to Vietnam's SH sector.

Establishing specialized research and innovation hubs that connect universities, research institutes, and private firms is equally important. These centers would facilitate interdisciplinary collaboration, technology transfer, and commercialization of R&D outcomes. In China, the National Green Building Innovation Center has played a key role in advancing material testing and lifecycle design for affordable housing [68]. Vietnam can replicate this model by leveraging its growing academic capacity in urban planning, architecture, and environmental engineering.

To foster creativity and attract young talent, the government should sponsor startup incubators and competitions focused on green construction technologies. These platforms can generate novel, context-specific solutions for SH and stimulate entrepreneurship. Experience from countries like Sweden and the Netherlands shows that such grassroots innovation initiatives can yield scalable solutions, particularly when linked to pilot projects and procurement incentives [69].

6.7. Enhance Policies on Land-Use Planning

For SH to contribute effectively to sustainable urban development in Vietnam, land-use planning must be more adaptive, integrated, and centered on human needs. Traditional zoning practices in Vietnam often prioritize large-scale real estate or industrial projects, leaving limited land reserves for affordable housing, especially in areas with adequate public services and infrastructure. This mismatch not only limits access to suitable living conditions for low-income groups but also exacerbates spatial inequality and urban sprawl. Therefore, reforming land-use planning to accommodate small- to mid-scale SH developments near employment centers, schools, healthcare facilities, and public transportation networks is crucial. Such proximity fosters social inclusion, reduces commuting times and carbon emissions, and contributes to more compact, efficient urban forms [70].

International experiences emphasize the importance of strategic urban planning that integrates affordable housing into the broader fabric of the city. For example, in Japan, Transit-Oriented Development (TOD) policies are used to cluster affordable housing along mass transit corridors, enhancing mobility for residents without private vehicles while supporting environmental goals [71].

To optimize limited land availability, Vietnam should revise urban planning regulations to permit higher floor area ratios (FAR) and building density specifically for SH projects, on the condition that they incorporate adequate green spaces, infrastructure, and social services. This targeted relaxation of density norms can make land more productive without compromising the quality of the urban environment. Studies show that increased urban density, when coupled with proper planning and service provision, leads to more sustainable resource use and better economic outcomes [72].

Furthermore, land-use planning must be closely aligned with long-term urban sustainability goals. Municipal authorities should integrate SH targets into master plans and conduct regular land audits to identify underutilized or idle land that could be repurposed for housing. Policy instruments such as land value capture, inclusionary zoning, and land banking can be used to secure land for SH without placing excessive fiscal burdens on public budgets [73].

To overcome the complex and multidimensional barriers facing Vietnam's SH sector, this study outlines a set of seven comprehensive strategies aimed at aligning SH development with the SDGs. Among these, two standout

strategies warrant particular emphasis. First, the implementation of targeted financial incentives—including tax breaks, subsidized credit lines, and land access advantages—can play a pivotal role in attracting private investment and enhancing the affordability and scalability of SH initiatives. Second, the formulation and enforcement of maintenance and renovation policies will ensure the long-term resilience and livability of the existing housing stock, safeguarding social assets and promoting environmental sustainability.

7. Conclusion

This study contributes a multidimensional framework to analyze barriers and propose strategic directions for advancing sustainable SH development in Vietnam, in alignment with national targets under SDG 11. By synthesizing economic, social, and environmental perspectives, the research identifies key structural bottlenecks—including financial constraints, limited land access, fragmented policy implementation, weak private sector engagement, and insufficient adoption of green building practices—that hinder the sector's transformation.

To address these challenges, the study offers a set of integrated policy and institutional strategies that emphasize sustainability, including targeted financial incentives, enhancement of regulatory and legal frameworks, diversification of investment and management models, improved data and monitoring systems, mainstreaming of environmental standards, stronger community engagement, and institutional capacity building. These recommendations provide actionable entry points for aligning Vietnam's SH development with climate and equity goals.

While the analysis provides national-level insights, further empirical research is needed at the provincial and project levels to assess localized implementation and evaluate the cost-effectiveness of green versus conventional SH models. Future work should also explore adaptive governance and participatory planning mechanisms that can ensure long-term livability and socio-spatial inclusion in SH projects.

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Conflict of Interest

Disclosure statement: No potential conflict of interest was reported by the authors. **Declaration of generative AI in scientific writing:** During the preparation of this work, the authors used ChatGPT to assist the writing process more naturally and enhance the paper's readability. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication. **Data availability:** Some or all data, models, or code that support the findings of this study are available from the corresponding author upon reasonable request.

Author Contribution

Ngan Vu Phuong: Writing - review & editing, Writing - original draft, Methodology, Investigation, Conceptualisation, Visualisation, Investigation, Formal analysis, Data curation. Thuy Thieu Thi Thanh: Writing - review & editing.

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