

CHAPTER 10 GREEN GROWTH

OVERVIEW

The Green Growth Sector Committee (GGSC) was established in 2014 to help develop the conditions for environmentally sound and sustainable businesses to prosper in Vietnam. Representing the private sector, GGSC works closely with public stakeholders, including the Government of Vietnam and its agencies, as well as donors and multilateral organisations.

I. CIRCULAR ECONOMY

Relevant authorities: Ministry of Finance (MOF), Ministry of Industry and Trade (MOIT), Ministry of Natural Resources and Environment (MONRE), Ministry of Planning and Investment (MPI), Ministry of Health (MOH), Ministry of Construction (MOC), Ministry of Transport (MOT), Vietnam Environment Administration (VEA).

The “Circular Economy” is a new model of production and consumption. It involves sharing, leasing, redesigning, recovering, reusing, repairing, refurbishing, and recycling existing materials and products for as long as possible. It is a more sustainable model of growth than the linear economy of “produce – use – discard” as it reduces waste to a minimum and uses discarded materials productively again and again in a different form. In doing so, it reduces the need for new raw materials and removes most waste and pollution from production.

We appreciate the progress of the new Law on Environmental Protection, especially the introduction of Extended Producer Responsibility (EPR). The role of the new Environmental Protection Fund (EPF) is still to be clarified and we recommend that the Government enable more participants (the private sector, NGOs, and Producer Responsibility Organization (PROs) to organise efficiently the move toward circularity. In particular, we recommend that the private sector is involved in decisions prepared and taken by the EPF.

1. Waste management

Issue description

Vietnam’s Law on Environmental Protection operates under the principles of minimisation, re-use, collection, and treatment meeting environmental standards.¹ However, most waste is still dumped into landfill without further processing, with 89 per cent of all solid waste in Hanoi and 70 per cent in Ho Chi Minh City being disposed of in this way.^{2 3} Unsanitary waste disposal not only causes environmental hazards and nuisance. It also wastes materials that could be recycled or, at least, used for energy generation. While we need to quickly devise a system to segregate dangerous waste to be treated in cement kilns, other waste can, for a time, also be

¹ Law 72/2020/QH14 of the National Assembly on environmental protection.

² “Modernising solid waste treatment technology: Turning waste into real resources”, *Natural Resources and Environment*, 12 November 2019. Available at: <<https://baotainguyenmoitruong.vn/hien-dai-hoa-cong-nghe-xu-ly-chat-thai-ran-de-rac-thuc-su-la-tai-nguyen-295645.html>>, last accessed on 8 December 2020.

³ “Hanoi running out of landfill site”, *Natural Resources and Environment*, 9 July 2019. Available at: <<https://baotainguyenmoitruong.vn/ha-noi-sap-het-cho-de-do-rac-249535.html>>, last accessed on 8 December 2020.

burned to generate electricity or heat. This is better than landfill, and could be a bridge to help reach the next phase.

We welcome Decision 491⁴ setting clear targets for the management of waste towards 2025 with a vision to 2050 and Decision 849⁵ setting action plans and timelines to ensure the integrated State management of solid waste from central to local levels. However, until now, the implementation process has not involved the private sector. This is, in our view, paramount to the success of, for example, combatting plastic waste. We suggest establishing a public-private partnership committee to discuss and direct green growth projects to put the revision of the legal framework into practice.

MNCs already have their own recycling and renewable energy targets and are ready to support Vietnam to achieve its goals. For this, a supportive regulatory framework is required. This would involve completing the legal framework on waste management, especially waste classification and segregation at source. It is essential that all dangerous and harmful waste be destroyed with no spillage into the environment and no cross-contamination. It is also important to increase public awareness of solid waste management, especially segregating discarded materials at household or company level, as is done in the EU, and to promote reduce – reuse – recycle. To do this, it would be relevant to legalise the secondary material marketplace, so it is done responsibly.

Potential gains/concerns for Vietnam

The goals of Decision 491 and action plans in Decision 849 are ambitious. To achieve these, all ministries and authorities will need to cooperate in implementing a regulatory framework that incentivises the public and private sectors. Regarding the legal framework, many of these goals require existing laws to be amended. Therefore, it is important to identify these laws and draft a plan to ensure their compliance as soon as possible. Besides, regulations need to differentiate solid waste from ordinary waste and state whether recycled material should be classified as waste (e.g. fly ash or recycled plastic for use as raw material in construction).⁶

Rapid urbanisation means that Vietnamese households – particularly in big cities – are discharging increasing amounts of waste into the environment. Municipal Solid Waste (MSW) generation per capita will reach 1.6 kg/person/day in 2025.⁷ The most basic components of solid waste are organic and inorganic waste.⁸ We believe that incentivising the compliant waste treatment sector would have positive results. On the contrary, actors who claim that they provide recycling and other waste treatment services at low cost and in accordance with the law – but then dump collected waste into the rivers, seas, and the general environment – must be held accountable. This is necessary to create a successful and compliant waste management industry. We appreciate how the Government has dealt with violations until now. However, there is always room for improvement.

4 Decision 491/QĐ-TTg dated 7 May 2018 of the Prime Minister adjusting national strategy for general management of solid waste to 2025 with vision towards 2050.

5 Decision 849/QĐ-BTNMT dated 8 April 2019 of the Ministry of Natural Resources and Environment on the plan to implement Resolution 09/NQ-CP on consistent State management on solid waste.

6 “Lack of regulations on plastic waste classification”, *Ministry of Natural Resource and Environment*, 23 October 2019. Available at: <www.monre.gov.vn/Pages/thieu-quy-dinh-ve-phan-loai-rac-nhua.aspx>, last accessed on 8 December 2020.

7 “State of the 3Rs in Asia and the Pacific”, *United Nations Centre for Regional Development*. Available at: <[www.uncred.or.jp/content/documents/5696\[Nov%202017\]%20Vietnam.pdf](http://www.uncred.or.jp/content/documents/5696[Nov%202017]%20Vietnam.pdf)>, last accessed on 4 March 2021.

8 Inorganic waste includes, for example, glass, porcelain, metal, paper, rubber, plastic, nylon plastic, fabric, and electronics. Organic waste includes mostly left-over or spoiled food, falling leaves, spent grain, bran, manure, cadavers, etc.

Recommendations

- > Continue strict enforcement of waste regulations and fair results-oriented prosecution for non-compliance.
- > Complete the legal framework on waste management, especially waste classification and segregation at source.
- > Legalise the secondary material marketplace.
- > Continue to provide a conducive business environment for compliant waste management businesses.
- > Increase public awareness of solid waste management.
- > Set up a public-private committee to propose solutions.

2. Addressing plastic pollution

Issue description

Plastic pollution remains a major issue. Unfortunately, Vietnam is the fourth-largest contributor to marine plastic pollution globally.⁹ Only 27 per cent of plastic in Vietnam is recycled. Meanwhile, the amount of plastic waste is increasing by up to 200 per cent each year.¹⁰ This situation poses serious impacts not only to marine life but also to sustainable economic development, the livelihoods of coastal residents, and potentially to food security. This is further complicated by containers of imported waste being sent for recycling to Vietnam and its neighbours.

Recycling alone is not a complete solution. The majority of plastics dumped are of too low value. Therefore, they would need to be compacted and used as cheap and long-lasting material, for example, to make roads or as construction materials. Furthermore, most plastics in Vietnam are non-compostable. Under the sun and wind, they break down into smaller and smaller fragments. Those smaller than 5mm, known as micro-plastics, can be ingested by wildlife and create problems in the ecosystem and threats to human health.¹¹ Thus, reducing the production and use of single-use plastic items, or recycling those that have economic value, is key. It would also be useful to promote and have supporting policies for innovative materials and technologies, i.e. compostable plastics and innovative compostable packaging materials. The conditions for recycling plastics, such as differentiated disposal and no contamination, make more worthwhile the recycling of other materials as well, such as paper, wood, clothes, and electrical items.

In light of the EVFTA, it is important that Vietnam complies with EU regulations.¹² This would, moreover, ensure that products originating from Vietnam can enter international supply chains and support the Circular Economy globally. The first step would be to evaluate the practical

9 J.R. Jambeck, R. Geyer, C. Wilcox, T.R. Siegler, M. Perryman, A. Andrady, R. Narayan and K.L. Law (2015), "Plastic waste inputs from land into the ocean", *Science*, Vol. 347, Issue 6223.

10 "Plastic waste increasing by 200%, Vietnam faces risk of becoming global landfill", *Tuoi Tre Online*, 28 September 2019. Available at: <<https://tuoi-tre.vn/rac-thai-nhua-tang-200-viet-nam-doi-mat-nguy-co-thanh-bai-rac-toan-cau-20190928164354037.htm>>, last accessed on 8 December 2020.

11 Op cit. Plastic waste inputs from land into the ocean p.14.

12 Waste, Electrical, and Electronic Equipment (WEEE), the Restriction of Hazardous Substances (ROHS), and Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH).

impact of these rules and their implementation. Vietnam has targeted a complete ban on single-use, non-compostable plastic packaging products by 2025. Stringent regulations are required to achieve this and, as a gradual approach, we suggest Vietnam finalises policies and mechanisms to limit the production and use of these items and develops the production of compostable plastic that can be certified using EU and US standards. This can be encouraged, initially, via increased taxes for the use of single-use plastic bags and the promotion of outreach programmes to raise public awareness. Experience in other countries, such as Rwanda¹³, has shown that a complete ban of these products, supported by widespread behavioural change, will contribute significantly to tackling plastic pollution. Vietnam has now developed to such a level that it can follow suit.

Under Environmental Protection Tax Law 57¹⁴ it is already possible to raise tax. However, this has not yet achieved its objective.¹⁵ We believe that the tax rate should be increased for using single-use plastic bags. Pilots can be used before this is implemented on a national scale. The next step will be a complete ban on these products. Household domestic waste should be classified and segregated at source to enable cost-effective recycling and treatment, accompanied by comprehensive policies that favour private investment. If waste is separated into two groups (organic and inorganic), or three groups (organic, plastics, and glass/metal), it will enable more cost-effective treatment of domestic waste and allow for private investment. In the EU, electronics, paper, used oil, and clothes are other “differentiated” collection categories. The classification of domestic waste can be piloted in one or two big cities before being replicated more widely. Besides single-use plastic bags, other products such as straws, cups, and other packaging materials that are currently made with non-compostable plastic should be made fully compostable after a transition period. The private sector and relevant government authorities should work hand in hand to implement the EPR.

Potential gains/concerns for Vietnam

Decision 491 states that, by 2025, “100 per cent environmentally-friendly plastic bags will be used in trade centres and supermarkets for the purpose of replacing persistent plastic bags to serve daily-life activities”. Vietnam’s National Action Plan on Ocean Plastic Waste Management by 2030¹⁶ (Decision 1746) aims to reduce plastic waste discharged into the sea and ocean by 75 per cent, end the use of disposable plastic products in coastal tourist attractions and resorts, as well as the disposal of fishing gear into the sea by 2030. The goals of Decision 491 and Decision 1746 are ambitious. However, they have been challenging in practice. Hence, to achieve these objectives, it is important to step up implementation. If this does not happen, it will impact the lives of people, animals, and the overall environment. Moreover, it will impact the role Vietnam can play in global supply chains.

Recommendations

13 E. Clavel, “Think you can't live without plastic bags? Consider this: Rwanda did it”, *The Guardian*, 15 February 2014. Available at: <www.theguardian.com/commentisfree/2014/feb/15/rwanda-banned-plastic-bags-so-can-we>, last accessed on 20 December 2020.

14 Law 57/2010/QH12 of the National Assembly dated 15 November 2010 on Environment Protection Tax.

15 “Loopholes and evasion limit success of plastic bag tax”, *Vietnam News*, 27 September 2018. Available at: <<http://vietnamnews.vn/environment/466610/loopholes-and-evasion-limit-success-of-plastic-bag-tax.html#pIv6B5o3VZtgPBtS.99>>, last accessed on 8 December 2020.

16 Decision 1746/QĐ-TTg dated 4 December 2019 of the Prime Minister approving National Action Plan on Ocean Plastic Waste Management by 2030.

- > Implement existing regulations and ensure strict enforcement.
- > Promote legislation to incentivise Vietnamese and multinational companies to comply with EU regulations to allow the country to enter global supply chains.
- > Ban oxo-degradable technology and introduce compostable plastic that can be certified under international standards to prevent greenwashing.
- > Promote investment in composting facilities and dedicated recovery supply chains to reduce the use of single-use plastics linked to organic waste.
- > Incentivise cost-effective recycling and treatment of domestic waste at the household level through classification to facilitate the implementation of the EPR law.
- > Set up the EPF as a public-private committee to propose solutions.

3. Water supply and Wastewater issues

Declining water quality has become a global issue as populations grow, industrial and agricultural activities expand, and climate change threatens to cause major alterations to the hydrological cycle. Over the last decade, the Government has taken action to deal with water-related challenges, and has achieved remarkable results.

Issue description

Despite undeniable progress in water and sanitation, Vietnam's future development is threatened by severe challenges arising from climate change, rapid industrialisation, and "home-made" environmental problems.

Potential gains/concerns for Vietnam

Vietnam's development comes at a cost. The country's natural resources are under immense pressure, resulting in water-stress and subsequent threats to human well-being and biodiversity. In the long run, Vietnam will face severe financial losses if no action is taken to mitigate the current water and environmental crises. If the water sector is to continue supporting the nation's rapidly-expanding economy, it will need to overcome critical challenges. Water management will need to be more efficient to meet rising demand; income per unit consumed will need to increase; the quality of construction and public awareness will need to rise; and threats from "too dirty, too little, and too much" water will need to be reduced. At the same time, policies, institutions, law enforcement, and financing will need to be improved, and international commercial participation will need to be allowed in water and sanitation services.

Recommendations

Make the water crisis a top-level issue and embark on an all-inclusive journey to protect Vietnam's water resources, aquatic life, and biodiversity. In particular:

- > Synchronise existing environmental policies to ensure a coherent political framework by better integrating the existing legal basis.

- > Improve the situation on the ground by increased transparency and controlling the implementation of environmental policies on provincial and local levels; strengthen law enforcement and the willingness to take regulatory action.
- > Listen to grass-root levels and encourage local environmental groups; support the actions of citizens to control the implementation of the State's policies.
- > Introduce and endorse water-sensitive urban design and take advantage of Blue-Green Infrastructure, including modern stormwater management.
- > Information – Communication – Education is key for a cleaner environment, so improve and adjust school and university curricula by integrating “green” issues; public awareness, in general, needs to be improved.
- > Take advantage of the knowledge and experience of international water companies through open, transparent, and fair public tenders.
- > Encourage the reuse of wastewater by providing legal frameworks, guidelines, and standards to share quality water for applications like irrigation and industrial production.
- > Adjust domestic and industrial wastewater fees to full cost recovery, implementing the “polluter-pays-principle”.
- > Foster sustainability-driven, water-wise tourism that will attract wealthy and nature-minded tourists; prevent the destruction of valuable ecosystems by uncontrolled tourism development.
- > Consider nature-based solutions in infrastructure.
- > Consider and endorse green financing to increase capital flows from the public, private, and non-profit sectors to sustainable development priorities.

5. Air quality control

Issue description

The air quality in Vietnam's major cities has reached dangerous levels and become a critical health concern.¹⁷ Sulphur dioxide, dust, dioxide, carbon monoxide and nitrogen dioxide are emitted from transportation, industry, and construction, as well as from coal power plants and cement factories. The Vietnam National Economics University found that air pollution has cost the Vietnamese economy US\$10.8-US\$13.6 billion per year since 2012. Meanwhile, the number of days where the air quality index reached hazardous levels in 2019 and 2020 was higher than in previous years. According to IQAir, Hanoi ranked 22nd in the most-polluted cities in the world.¹⁸ It is, therefore, important to revise the Law on Environmental Protection 2014, particularly with regard to air pollution. Furthermore, specific policy targets and regulations for air quality control and emissions should be introduced. This should happen alongside the introduction of a higher and additional tax for coal power plants, cement factories, and other major polluters according to the estimated socio-economic and health impact. Finally, investment in filters and other devices in, for example, power stations that reduce pollution is required together with the acceleration of the development of a non-polluting public transportation sector.

¹⁷ “Minister Tran Hong Ha: Air pollution resulted from external causes”, *Government Newspapers*, 19 December 2019. Available at: <<http://baochinhphu.vn/Hoat-dong-Bo-nganh/Bo-truong-Tran-Hong-Ha-O-nhiem-khong-khi-do-nguyen-nhan-chu-quan/383018.vgp>>, last accessed on 19 December 2020.

¹⁸ “World Air Quality Ranking”, *iqair*. Available at: <www.iqair.com/world-air-quality-ranking>, last accessed on 4 March 2021.

Potential gains/concerns for Vietnam

Vietnam is lacking specific regulations for air pollution. We note that, in 2019, the Government launched a national action plan for air quality management by 2020 with a vision to 2025 (Decision 985a). Also in 2019, MOH issued a 14-step guide to help deal with air pollution, the first-ever public advisory on this subject.¹⁹ The VEA is required to set emissions targets.²⁰ However, there is a lack of clarity on Government policies on specific targets for air quality control. Moreover, Vietnam has no odour regulations against strong smells from landfills, factories, and aquaculture. The significant improvement of air quality during COVID-19, especially during “lock downs”, indicates that there are ways to improve air quality.

Recommendations

- > Accelerate the revision of the Law on Environmental Protection 2014, particularly with regard to air pollution.
- > Introduce specific policy targets and regulations for air quality control and emissions.
- > Increase tax for coal power plants, cement factories, and other major polluters according to the estimated socio-economic and health impacts.
- > Introduce clean air as a high-level KPI for energy companies, starting with EVN.
- > Invest in filters and other devices that reduce pollution, starting with power stations.
- > Accelerate the development of a non-polluting public transportation sector.

II. GREEN AND ENERGY-EFFICIENT BUILDINGS IN A SUSTAINABLE CITY

Relevant authorities: Ministry of Construction (MOC), Ministry of Finance (MOF), Ministry of Industry and Trade (MOIT), Ministry of Natural Resources and Environment (MONRE), Ministry of Planning and Investment (MPI)

Issue description

In recent years, urbanisation in Vietnam has accelerated and its population continues to grow. The urbanization speed ratio is 3.4 per cent per year, with a total of urban population is 32.2 per cent - this urban area contributes to 70 per cent of Vietnam’s economic outputs..²¹ As a driver of environmental degradation and climate change, urbanisation in Vietnam for residential dwellings and industrial expansion focuses on flatland, coastal, and flood-prone areas. Urbanisation is the major contributor to climate change, accounting for between 71 and 76 per cent of CO2 emissions, and represents high concentrations of financial, infrastructure, and human assets and activities that are vulnerable to the impacts of climate change.²²

¹⁹ “Health ministry issues first public advisory on air pollution”, *VN Express*, 16 December 2019. Available at: <<https://e.vnexpress.net/news/news/health-ministry-issues-first-public-advisory-on-air-pollution-4028017.html>>, last accessed on 16 December 2020.

²⁰ “Vietnam sets 2020 emissions targets as nation chokes on smog”, *VN Express*, 23 September 2016. Available at: <<https://e.vnexpress.net/news/news/vietnam-sets-2020-emissions-targets-as-nation-chokes-on-smog-3472995.html>> last accessed on 8 December 2020.

²¹ ‘UN-Habitat in Vietnam’, UNHABITAT, Available at <https://unhabitat.org/vietnam>, last accessed on 9 January 2023.

²² More information available at <https://unhabitat.org/topic/climate-change>.

The construction industry is predicted to gain more focus and investment, in light of the increasing demand for buildings in Vietnam. However, this industry is unarguably one of the main contributors to global warming and the largest polluter affecting the environment.²³ According to the Ministry of Construction, Vietnam's housing demand will increase by 70 million square meters each year, equivalent to 17,500 buildings with 30 floors by 2030.²⁴ As part of efforts to decrease greenhouse gas emissions, the country has issued a range of policies and programmes²⁵, including the National Determined Contribution (NDC) where Vietnam has committed to reducing greenhouse gas emissions by 9 per cent by 2030.

Promoting green, energy efficient buildings is essential. Investors, project owners, and enterprises must also take responsibility for investing in, constructing, managing, and operating projects according to standards on energy-efficient and green buildings and urban areas. The ultimate aim should be to increase quality and convenience, ensure user health and energy efficiency, and protect the environment. We welcome the development of smart cities, as this shows that the country is moving toward green growth and sustainable development. However, by the end of 2021, Vietnam had just over 200 green building projects.⁴ This is a small amount to pursue the ambitious targets of the NDC. Vietnam should aim much higher, while making sure it is on target even for that level. There are, however, challenges that Vietnam needs to address to make buildings greener and cities more sustainable.

1. Green Building's Legal Framework

Compared to the current growth rate of the construction sector, the number of recognised green buildings in Vietnam is modest compared to other countries in the region. Besides, the legal policy is also a significant barrier that deters many businesses from setting up green buildings. The draft law submitted by the Institute of Architecture (MoC), to approve the "Development of green and energy-efficient buildings to 2030", includes a policy that all new construction or renovation projects must meet the National Technical Regulations on Energy Efficient Buildings. This includes apartment buildings, offices of other agencies and public buildings invested and operated by the State budget with GFA greater than 2,500 sqm. This has been rejected due to a lack of provisions on "Green Building" in the subsidiary and ancillary regulations that back up it. To promote the development of green buildings in Vietnam, it is necessary to quickly complete and/or update the legal framework and raise awareness of relevant stakeholders, mainly Government Agencies, as the current legal system in Vietnam is almost devoid of incentives for developers.

2. Passive Design and Building Certification

²³ More information available at: <https://vir.com.vn/breaking-barriers-in-green-buildings-90835.html>.

²⁴ More information available at: <https://www.vietnam-briefing.com/news/green-buildings-in-vietnam-how-sustainable-are-they.html/#:~:text=As%20per%20IFC%2C%20by%20September,percent%20and%207%20percent%20respectively.>

²⁵ (1) Resolution 55-NQ/TW on the Orientation of the National Energy Development Strategy of Vietnam to 2030, with a vision to 2045; (2) Resolution 140/NQ-CP on the Action Plan to implement Resolution 55-NQ/TW, which specifies tasks for saving energy and improving efficiency in the construction sector; (3) Revised Law on Construction (2020); (4) Vietnam Energy Efficiency Programme 2019-2030; (5) Construction materials development strategy of Vietnam 2021 – 2030, with a vision to 2050; (6) Decision 1393/QĐ-TTg on "National Green Growth Strategy"; (7) Decision 403/QĐ-TTg on "Actions to implement the National Green Growth Strategy"; (8) Decision 419/QĐ-BXD on "Plan of actions of the construction industry to implement the Green Growth Strategy"; and (9) Decision 3457/QĐ-UBND on "Regulating the management of urban spaces and urban architecture of the current Ho Chi Minh City downtown area".

Construction and buildings are the main users of electricity, accounting for up to 40 per cent of national consumption. As such, buildings in Vietnam need to become more energy-efficient. This would increase construction costs by only around 3 per cent. However, it would also help reduce operational costs by up to 36 per cent. Integrating energy-efficient devices, ideally during construction, will complete the transition and have a durable impact on the sustainability of the city where it is implemented. In this process, architects ensure that it can be applied from the design phase, with passive design and environmentally-friendly materials, to energy-efficient devices during construction. This process also applies to urban master planning. We encourage all buildings to achieve the minimum standards of the VEEBC²⁶ (or a simplified version) in order to receive the Building Licence at Basic Design Stage. Furthermore, EVN could impose a tariff scheme that rewards low-energy-consumption buildings with lower prices and imposes higher prices on high-consumption buildings.

We recommend that the Government provide effective encouragement. This could include a commitment that at least 75 per cent of existing Governmental buildings will be Green Building certified up to 2030, rising to all new buildings from 2023 onwards. Many certification options are available in the market.²⁷ We support a move to recognise multiple systems in Vietnam, letting the market determine which are practical. These could be licensed for operation based on a set of simple criteria such as transparency, reliability, and coherence according to recognised norms. However, a clear urban planning showcase should be produced, including not just green buildings but also water, waste, traffic and environmental livelihood improvement solutions. What the public and local government can do at an individual building level should be integrated into a holistic urban vision. Linking all of it together in a smarter and more liveable environment helps reduce temperatures and absorb emissions. This macro-level programme of incentives and policies could support Vietnam to develop smart and sustainable cities. The Vietnam Energy Efficiency Building Code (VEEBC), amended and published in 2017, provides a basis to resolve difficulties in localities in applying standards. MOC has organised several training sessions for officials at Departments of Construction to improve their capacity. However, the code could be more widely shared and applied. Due to a lack of enforcement of regulations, global corporate guidelines seem to be the only drivers as there is no need to reduce operating expenses due to low energy prices. Green buildings investments remain far too low to address current environmental concerns.

Policies encouraging the development of energy-efficient and green buildings should be developed and include construction with public investment. They should promote the application of planning, architectural, material, technical, and project management solutions to use energy economically and efficiently. A comprehensive life-cycle approach should be applied, while green labels and Environmental Product Declarations (EPDs) should be further promoted.

Potential gains/concerns for Vietnam

Vietnam's critical roadblocks to green building adoption include the lack of adequate support in policies, green building specialists, and higher initial investment. As per Vietnam Green

²⁶ The Vietnam Energy Efficiency Building Code.

²⁷ These include the United States Green Building Council's Leadership in Energy and Environmental Design (LEED), the International Finance Corporation's Excellence in Design for Greater Efficiencies (EDGE), and Vietnam Green Building Council's LOTUS.

Buildings Council (VGBC), misinformation is one reason for Vietnam's previously delayed adoption of green buildings, with the perception of a 25 per cent premium for constructing a green equivalent.⁴

Recommendations:

- > Integrate "Green Building" wording in subsidiary and ancillary construction laws.
- > Enforce and promote the application of sustainable building materials solutions through the Vietnam Association for Buildings Materials..
- > Apply a comprehensive life-cycle approach.
- > Promote green labels and EPDs.
- > Provide greater transparency on the timing of the introduction of market-based pricing for electricity.
- > Remove subsidies on fossil-fuel-based electricity.
- > Publish a Roadmap to Retail Electricity Tariffs for commercial and industrial power consumers.
- > Make buildings more energy efficient.
- > Make minimal certification a precondition for the licensing of certain types of buildings regardless of their use and incentivise higher levels of certification.
- > Prepare a clear urban planning showcase, including not just green buildings but also water, waste, traffic, and environmental livelihood improvement solutions.

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