

Vietnam Country Climate and Development Report (CCDR) Review: A Resilient Net Zero Pathway Is Proposed. How Can It Be Achieved?



Introduction

The Country Climate and Development Report (CCDR), disclosed on July 1, 2022, provides a detailed analysis of the threats climate change poses to Vietnam's most important sectors and regions. In addition, it highlights the two development paradigms aligned with economic growth and substantive action to address climate change, and includes an analysis comparing the cost of acting to that of inaction. The Bank has said that these recommendations will be taken into account in all future projects and operations.

This CCDR is centered around establishing the conditions

needed to shift to a resilient and low-carbon development pathway. Additionally, it includes a set of key messages stating that Vietnam, with the support of its international partners, must:

- Build resilience in its infrastructure and legal framework to lower its high vulnerability to climate change, support national welfare, and meet its long-term development goals.
- Decarbonize growth to lessen reliance on fossil fuels, reduce the number of premature deaths due to poor air quality, and remain competitive in global markets.
- Promote a just transition, including social protection measures, to help those disproportionately impacted by climate change and the transition to a resilient, low-carbon development pathway.
- Catalyze the financing needed to support the adoption of a resilient and net-zero development pathway, which includes leveraging the private sector and its expertise.
- Develop the institutional capacity needed to formulate and implement policies that build adaptation and reduce greenhouse gas emissions.

While these key messages form the basis of the CCDR and its recommendations, there are critical obstacles or hurdles preventing climate action. They include:

- A lack of strong institutional capacity in the Vietnamese government, making it difficult to implement effective environmental policies.
- The notion among Vietnam's leaders that development and climate action are incompatible.
- The cost of transitioning to a new development model will require significant financing from private, public, and external sources.

Summary of CCDR

Vietnam's contribution to global greenhouse gas (GHG) emissions is low, accounting for 0.8 percent of total emissions, on par with its share of global GDP. As its gross domestic product (GDP)¹ has risen, so too have its emissions. Vietnam has even become one of the most GHG-intensive economies in East Asia, with its carbon intensity at 1,486.2 (tCO₂e/ million\$GDP).² The rapid increase is a result of Vietnam's dependence on coal for energy.

Despite its historically low contribution to global emissions, its vulnerability to climate change is extremely high and threatens to reverse the country's development progress and its goal of becoming a middle-income country by 2045. A recent Country Environmental Analysis (CEA) suggests that Vietnam lost \$10 billion, or 3.2 percent of its GDP, to climate change impacts in 2020, and the costs are expected to continue rising.³ According to the CCDR, the absence of substantial action to combat climate change could push one million people into extreme poverty by 2030 and result in economic losses of 12 to 14.5 percent of GDP per year by 2050. Additionally, the World Bank Group (WBG) completed a study and found that close to "10 percent of Vietnamese households are vulnerable to falling into poverty due to exposure to a climate-related event."⁴ Thus, it is critical to take action to mitigate and reverse this trajectory. One way to do this is through Vietnam's legal and institutional framework.

Based on the legal framework presented in the CCDR, it can be inferred that the Vietnamese government recognizes the severity of climate change and is committed to taking action. The CCDR highlights four official documents dictating Vietnam's response to climate change, including the [Vietnam Green Growth Strategy \(VGGS\)](#), [Vietnam's Nationally Determined Contribution \(NDC\)](#), the [Law on Environmental Protection \(LEP\)](#), and [draft Power Development Plan VIII \(PDP8\)](#). Of these, the LEP has been characterized as "the most significant modernization of Vietnam's environmental legislation since 1993 and has climate change as its main focus."⁵ Similarly, PDP8 establishes the pathway and necessary conditions for supporting renewable energy, but it has not yet been finalized or implemented. However, these policies have shortcomings; for instance, the VGGS, adopted in 2021,

does little to address adaptation.⁶ Additionally, there is a discrepancy in the metrics used in climate policies; Vietnam's NDC establishes mitigation as a reduction in GHG emissions, but the VGGS defines it as reduced carbon intensity of GDP.⁷ These issues will need to be resolved for Vietnam to clarify and meet its domestic and international climate commitments.

Vietnam has reaffirmed its commitment to climate action through the Prime Minister's pledges at the UNFCCC 26th Conference of the Parties (COP) in 2021. At COP26, the Prime Minister made three ambitious commitments: [net-zero emissions by 2050](#), [ceasing all deforestation by 2030](#), and a [30 percent reduction of methane emissions from 2020 levels by 2030](#).⁸ While this is commendable, these commitments have yet to be incorporated into Vietnam's existing policies, and the CCDR notes that Vietnam lacks the institutional capacity for climate action to be meaningful and effective.

One reason for this is the variance across ministries in funding allocated towards climate and the environment. Nevertheless, the PM's commitments present an opportunity for Vietnam to incorporate them and develop the institutional capacity it needs to create more effective legislation. The CCDR has been released at a critical time because it details how adopting a new development paradigm centered around increasing resilience and promoting decarbonization is in the country's best interest. It also outlines the steps to take for implementation.

The CCDR presents two development models Vietnam can combine to meet both its climate and development objectives. The Resilient Pathway concentrates on building resilience to climate change in the most vulnerable sectors (agriculture and forestry, infrastructure, and trade and manufacturing) and regions (Mekong Delta and shores and cities). This pathway uses two models, the computable general equilibrium (CGE) model and the probabilistic catastrophe model, to estimate the economic costs of action versus inaction.⁹ While shifting to this development pathway requires an estimated \$342 to \$411 billion from 2022 to 2050, to be mobilized through tax revenues or borrowing, it is cheaper than not taking action, with climate change impacts expected to cost between \$400 and \$523 billion.¹⁰ Incorporating considerations of adaptation and developing resilience to climate change is incredibly important because of Vietnam's high vulnerability to climate change. Acting now will lower the future costs of rebuilding infrastructure

1 World Bank Group. 2022. Vietnam Country Climate and Development Report. CCDR Series. Washington, DC: World Bank. <http://hdl.handle.net/10986/37618>. License: CC BY 3.0 IGO, p.7.

2 World Bank Group, Vietnam Country Climate and Development Report, p.8.

3 World Bank Group, Vietnam CCDR, p.6.

4 World Bank Group, Vietnam CCDR, p.29.

5 World Bank Group, Vietnam CCDR, p.11.

6 World Bank Group, Vietnam CCDR, p.11.

7 World Bank Group, Vietnam CCDR, p.11.

8 World Bank Group, Vietnam CCDR, p.11.

9 World Bank Group, Vietnam CCDR, p.17.

10 World Bank Group, Vietnam CCDR, pp.18-19.

and human capital.

Meanwhile, the complementary Decarbonization Pathway highlights the need to decarbonize the sectors contributing the most GHG emissions (energy, transport, agriculture, and industry) to meet Vietnam's goal of net-zero emissions by 2050.¹¹ The two means for achieving this are through institutional reforms and carbon pricing. These two instruments should be used in tandem to maximize emissions reductions and encourage behavioral changes. The CGE model shows that decarbonization and development are not contradictory, and that if policies are implemented properly, the economy can grow while shifting away from fossil fuels. This pathway is estimated to cost \$81.3 billion, with 80 percent being used to help spur the transition in the energy sector.¹² A carbon pricing policy, whether it be a carbon tax or cap and trade program, represents a means for generating revenue that can be directed towards decarbonization. If Vietnam establishes a price on carbon at \$12 per ton in 2022 and increases it to \$90 by 2040, it would generate \$80 billion that can be used to help support the transition.¹³ Indeed, evidence shows carbon will need to be priced aggressively to result in the emissions reductions needed to meet the net-zero commitment.¹⁴

A central theme throughout the CCDR is the emphasis on a just transition, which will be needed in both the resilient and decarbonization pathways.¹⁵ According to the CCDR, the most vulnerable groups in Vietnam are ethnic minorities, low-income communities, unskilled workers, and those less educated, with the degree of vulnerability varying based on location, socio-economic status, and other factors.¹⁶ The CCDR presents opportunities to advance a just transition in the context of building resilience and decarbonization.¹⁷ One of note is to develop a new, strong social safety net, which can be used to help in the event of a natural disaster or provide assistance during the process of decarbonization. The focus on vulnerability to disasters is appropriate given the country's overall vulnerability in this regard and that as a fossil fuel importer, its domestic fossil fuel industry is limited in scope and employment.

The total investment for transitioning to a resilient and

11 World Bank Group, Vietnam CCDR, p.35.

12 World Bank Group, Vietnam CCDR, p.35.

13 World Bank Group, Vietnam CCDR, pp.35 & 63.

14 The CCDR states that if carbon is priced at \$90 per tCO₂, it will result in a 42.8 percent reduction compared to business as usual (BAU) in 2030 and 73.6 percent in 2040.

15 According to the International Labour Organization (ILO), a "just transition" refers to "greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind." (https://www.ilo.org/global/topics/green-jobs/WCMS_824102/lang--en/index.htm).

16 World Bank Group, Vietnam CCDR, p.54.

17 World Bank Group, Vietnam CCDR, p.31.

net-zero development pathway (RNZP), which combines the two development models, is estimated at \$368 billion or 6.8 percent of GDP per year through 2040.¹⁸ The CCDR presents three sources that together can deliver this financing. They are the private sector (\$184 billion or 3.4 percent of GDP per year), public sector (\$130 billion or 2.4 percent of GDP per year), and external financing (\$54 billion or 1 percent of GDP per year).¹⁹ Each of these sources is responsible for contributing to a critical aspect of the transition to the RNZP:

- For the private sector, one of the most promising opportunities for mobilizing is through green finance, which is nascent in Vietnam.²⁰ Developing the capacity at domestic financial institutions can help to increase the share of green finance and sustainable investments.
- The role of the public sector is important as it has the responsibility to "cover the early costs" of the transition. However, as discussed earlier, the government has tools it can utilize to generate revenue such as a carbon tax.²¹
- Finally, Vietnam has the opportunity to use the large number of multinational companies and foreign investments as leverage for generating the necessary external financing. Many of these companies operating in Vietnam have mitigation and adaptation commitments, and the government can provide incentives to help channel the revenue generated toward efforts that support mitigation and adaptation.²²

It is worth noting that the \$368 billion/year cost is an estimated average, and sources and uses of funds are likely to be uneven. This may require adjustment in how Vietnam and its funders approach funding its RNZP.

The CCDR concludes with a presentation of five recommendations, or priority areas, that should be at the forefront of decision-making and future plans. They are: developing a climate program specifically for the Mekong Delta; increasing resilience in areas most vulnerable to climate change, such as coastal cities; significantly reducing air pollution; spurring the clean energy transition; and enshrining social protection systems to ensure a just transition.²³

18 \$254 billion is needed for adaptation and \$114 billion for mitigation. World Bank Group, Vietnam CCDR, p.61.

19 World Bank Group, Vietnam CCDR, p.61.

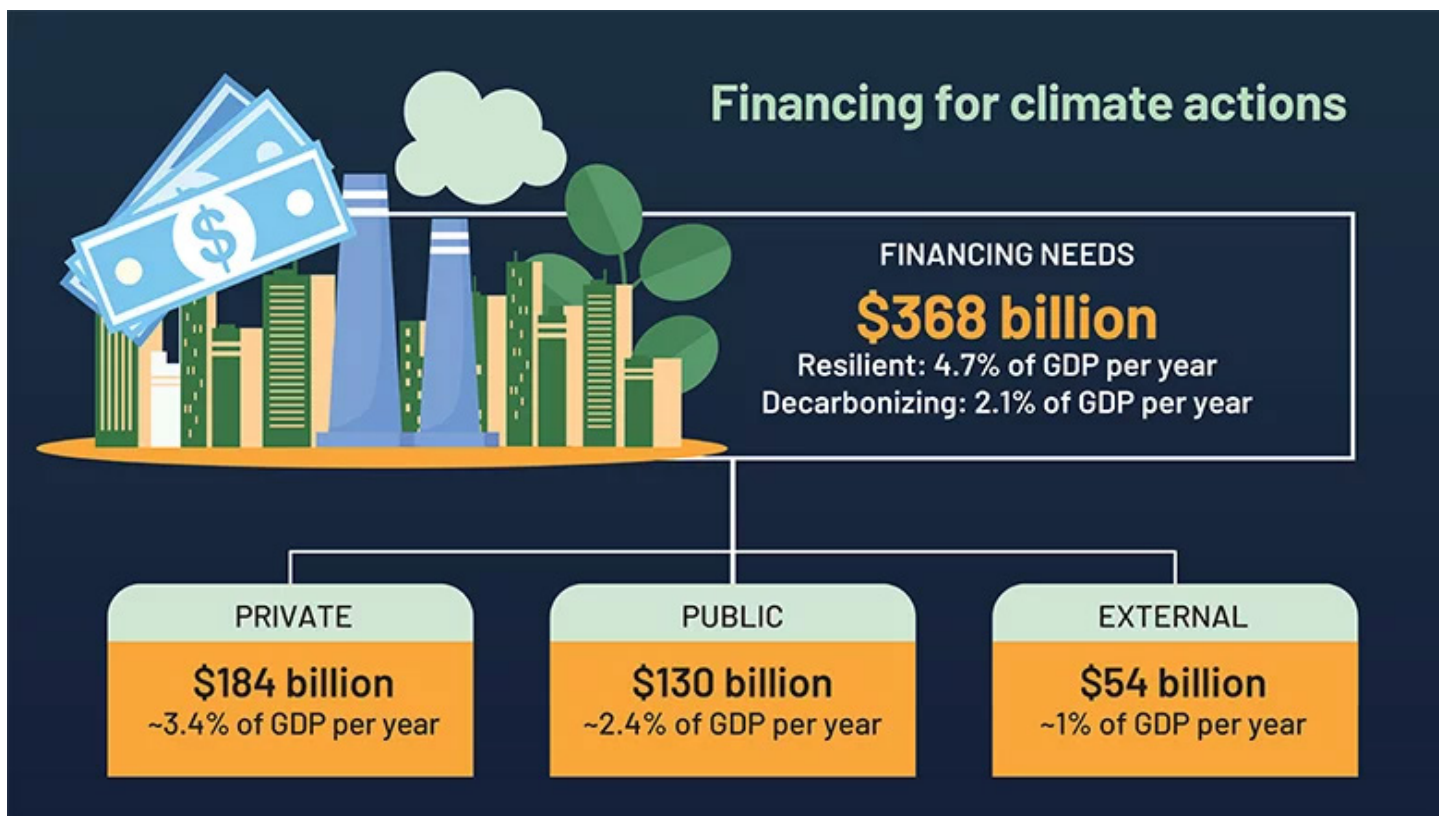
20 World Bank Group, Vietnam CCDR, p.62.

21 World Bank Group, Vietnam CCDR, p.64.

22 World Bank Group, Vietnam CCDR, p.64.

23 World Bank Group, Vietnam CCDR, pp.67-68.

FIGURE 1: FINANCING COSTS FOR TRANSITIONING TO AN RNZP



Source: World Bank Group, Vietnam Country Climate and Development Report, Accessed August 18, 2023.

Role of the World Bank

The CCDR is an important document for the World Bank as it will influence all future lending and operations in Vietnam. The Bank has an important role to play in this process based on its technical expertise, yet surprisingly the CCDR does not clearly define the Bank’s role in helping Vietnam transition to an RNZP.

The Bank has considerable technical expertise in instituting policy reforms that can help Vietnam transition to an RNZP. The CCDR notes that the Bank is utilizing its policy expertise by helping the Vietnamese government set up a cap and trade program.²⁴ While this will help Vietnam with its goal of decarbonization, there is more the Bank can do to support decarbonization and building resilience. For instance, the Bank has several opportunities to support policy reforms or investment projects in the transport sector. Vietnam’s transportation sector consumes a great deal of fossil fuels due to the high number of motorbikes and private vehicles. In a four-year span, from 2016 to 2022, the percentage of motorbikes and passenger vehicles rose by 138

percent and 177 percent respectively.²⁵ Consequently, air pollution and GHG emissions have risen. In 2019, the transport sector produced 42.66 Mt CO₂e and its GHG emissions are projected to rise six to seven percent per year until 2030.²⁶ In addition, a significant portion of government funding is allocated towards importing fuel, with the amount continuously rising due to the increasing number of vehicles and motorbikes.

Therefore, it would be beneficial for the Bank to help Vietnam develop a robust public transportation system (including a network of metro, bus rapid transit (BRT), and electric buses) along with a rising fuel economy standard.²⁷ A fuel economy standard of four liters per 100 kilometers in 2025 would help Vietnam reduce its emissions by up to 6.6 percent, thus helping to reduce air pollution, GHG emissions, and lower government spending on fuel.²⁸ Similarly, the creation of a robust,

²⁵ World Bank Group, Vietnam CCDR, p.47.

²⁶ “Historical GHG Emissions, Climate Watch, accessed August 18, 2023, <https://www.climatewatchdata.org/ghg-emissions?breakBy=sector&chart-Type=area®ions=VNM&source=Climate%20Watch>.

²⁷ Currently, the percentage of people using public transportation in Hanoi and Ho Chi Minh City (15 percent and nine percent) are much lower than the rates of other countries in the region. One reason for this is that the infrastructure is still being developed.

²⁸ World Bank Group, Vietnam CCDR, p.47.

²⁴ World Bank Group, Vietnam CCDR, p.12.

reliable public transportation network could provide the same benefits.

Another role for the Bank to play in implementing the recommendations of the CCDD is to primarily support projects aligned with a low-carbon and resilient pathway and its own climate goals. One of the Bank's climate commitments is to help reduce dependence on coal and assist in decommissioning coal plants.²⁹ This is particularly useful for Vietnam because it has a high capacity and dependence on coal. While Vietnam signed the "Global Coal to Clean Power Transition Statement" at COP26 and is committed to transitioning away from it, its actions have proven to be [contrary](#).³⁰ Therefore, the Bank can help Vietnam decommission its coal plants and further develop its capacity for renewables, but a critical component of this will be providing skills development and training for workers.

The Bank's climate commitments also align with Vietnam's needs on climate finance.³¹ In Vietnam, climate finance is still in its early stages, accounting for five percent of total financing in 2020.³² This presents an obstacle for mobilizing private sector finance, but also presents an opportunity for the Bank to use its expertise and help Vietnam's financial institutions establish a strong capacity for financing green projects.

An integral component of a successful transition to a low-carbon resilient development pathway requires ensuring that workers have the skills necessary to excel in the new economy. While the RNZP is expected to increase the number of climate mitigation and adaptation jobs by 726,000 in 2030 to one million by 2040, there will be a fundamental shift in the types of jobs available. However, not all jobs can be replaced, especially those in sectors that are significantly contributing to climate change.³³ To protect workers and the economy, it is critical to develop a national skills program to provide training for workers to equip them with the training they need to flourish in clean, green jobs.

To do this, the Bank can collaborate with the Vietnamese government and private sector to devise sectoral or

29 "10 Things You Didn't Know About the World Bank Group's Work on Climate Change," World Bank Group, accessed August 18, 2023, <https://www.worldbank.org/en/news/factsheet/2021/10/29/10-things-you-didn-t-know-about-the-world-bank-group-s-work-on-climate>.

30 A reporter, Clara Ferreira Marques, found that "Vietnam has slashed an environmental tax on fossil fuels. Its long-awaited Power Development Plan 8- the primary framing instrument for the next decade and beyond, and likely an improvement, with coal projects reduced- is still a work in progress." See "Southeast Asia Can't Afford Climate Backsliding." Analysis by Clara Ferreira Marques, Bloomberg, October 7, 2022.

31 The World Bank has committed to climate finance accounting for 35 percent of its financing by 2025.

32 72 of 85 credit institutions do not have a unit working on green finance and "74 lack a specific procedure on green credit appraisal."

33 World Bank Group, Vietnam CCDD, p.55.

economy-wide skills training programs. One sector that would benefit from this is agriculture. Vietnam's agricultural sector is expected to face losses of 5.6 to 6.2 percent by 2030 and 7.6 to 10.6 percent by 2050 as a result of climate change.³⁴ These losses can be avoided or mitigated if the Bank helps by providing Vietnam with soil scientists and technical experts who would work with farmers and advise them on the ways to incorporate mitigation and adaptation into agricultural practices. Further, the Bank can support climate-smart agriculture projects in Vietnam, which will help the agricultural sector become more resilient and reduce its high emissions.

The Bank has a critical role to play when it comes to financing, specifically mobilizing finance. As a lower-middle income country, Vietnam has access to financing sources, such as the Green Climate Fund, that were established to help countries meet their NDCs. However, overall climate financing for developing countries remains insufficient to answer many of their needs, including Vietnam's. The Bank can provide Vietnam with some of the external financing it needs, as reflected by climate themes in its [project portfolio](#). Vietnam also benefits from the World Bank-managed [Climate Investment Funds](#) (CIF), which has provided Vietnam with \$250 million to support energy efficiency, renewable energy, and transport programs.

Areas for Improvement

The CCDD is a valuable document but omits or poorly targets multiple key elements.

1. Missed Synergies: One element is the opportunity for synergies between the two pathways. For example, Vietnam has significant coastal mangroves that can contribute both to climate mitigation and adaptation. However, many of these have been lost to shrimp farming. Models exist for sustainable aquaculture³⁵ in the Mekong River Delta that should be incorporated here.

2. Generic Recommendations: Another issue throughout the CCDD is the use of generic recommendations, most clearly illustrated in the forestry sector. Vietnam's forests provide a number of economic and environmental services but are facing threats due to land use changes, overexploitation, and a lack of oversight. Still, the main recommendation is to increase investments in afforestation and reforestation, citing Vietnam's commitment to end all deforestation by 2030. This broad recommendation fails to address the root

34 World Bank Group, Vietnam CCDD, p.21.

35 World Bank. 2019. [Forest Country Note – Vietnam](#). World Bank, Washington, DC - page 17. See also Pham TT, Hoang TL, Nguyen DT, Dao TLC, Ngo HC and Pham VH. 2019. [The context of REDD+ in Vietnam: Drivers, agents and institutions](#) 2nd edition. Occasional Paper 196. Bogor, Indonesia: CIFOR.

causes of deforestation and forest degradation, such as competing land uses, overexploitation of resources, and insufficient forest governance, as identified in the Bank's own Country Forest Note. This feeds into another concerning element, the failure to use and include metrics, particularly for the forestry sector. The CCDR fails to note the number and other parameters of trees that should be planted (and nurtured) to restore the ecosystem and prevent degradation from extreme weather events such as landslides and flooding. The absence of metrics reinforces our observation that the recommendations are generic.

3. Ill-suited Recommendations: Another shortcoming of the recommendations is that many are ill-suited for Vietnam. For example, the CCDR repeatedly emphasizes the Vietnamese government's lack of institutional capacity, yet an overwhelming majority of sectoral recommendations require enhanced institutional capacity. It is unrealistic to expect these recommendations to be implemented without plans addressing these needs.

4. Promotion of (Imported) LNG: One final concern is the CCDR's promotion of natural gas, specifically liquefied natural gas (LNG), as a transition fuel. LNG is portrayed as a clean, low-carbon fuel, but this is contingent on avoiding methane leakage in its production and risks locking in future GHG emissions. Aside from the environmental impacts, LNG will need to be imported, which could reduce the amount of government funding directed towards renewables and require enacting a new legal framework. LNG delays the transition to renewable energy.

5. Focus on Transitional, Not Systemic, Solutions: The promotion of LNG as a transition fuel and the failure

to adequately account for benefits derived from climate actions in assessing policies and programs are serious flaws. The failure of the CCDR and its recommendations to take into account the overlapping nature of the climate crisis is another significant shortcoming. Vietnam has the capacity to build a resilient net zero pathway, and the CCDR needs to focus on how that can be realized rather than focusing on obstacles and short-term transitional solutions where better options exist for climate and development synergies to be realized.

Conclusion

The CCDR presents two pathways demonstrating the compatibility between climate action, development, and economic growth. However, to achieve these goals, Vietnam still faces significant barriers, such as limited institutional capacity, the narrative that climate and development are incompatible, and the need to secure funding for climate initiatives.

Vietnam stands out as the most GHG-intensive economy in East Asia. While it has opportunities to decrease this intensity through coal phase-out programs and decommissioning coal plants, shifting from one environmentally degrading source (coal) to another (LNG) will do little to curb Vietnam's overall GHG emissions. In addition, it will not help Vietnam reduce its vulnerability to climate change, threatening its aspiration of becoming a middle-income country and jeopardizing other development gains, such as poverty reduction. Going forward, the Bank should heed its own advice and align its future projects and operations with the CCDR's recommendations.

FOR FURTHER INFORMATION ON THE ISSUES RAISED IN THIS REPORT, PLEASE CONTACT BANK INFORMATION CENTER AT:

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