

Present and future of Forest Carbon Project in Vietnam

Based on our recent publication “[Carbon Projects and ASEAN: Opportunities and Challenges](#)” we have set out the understanding of carbon credit transaction in general and the regulatory landscape and effort of developing carbon market in Vietnam. In this publication, we will dive into the forest carbon project in general, its present, future, potential, and relevant legal development in Vietnam.

What is a Forest Carbon Project?

Functions of forest carbon project

Forest carbon project is a nature-based solution for climate change mitigation, contributing to mitigation and prevention of crossing a 2°C average of global warming committed under the Paris Agreement.¹ Forest carbon project captures and stores carbon dioxide (CO₂) with biomass and soils of forests, achieving an offsetting effect of the GHG emission on the global surface.

In general, forest carbon project involves 2 sides of stakeholders, the sell side, namely the program developer and forest owner that develop the project and sell the generated offsets or credits; and the buy side, namely the financier who finance the project or purchaser who acquire the offsets or credits generated from the project.

Types of forest carbon project

There are two broad types of forest carbon project, namely (i) Afforestation or Reforestation (A/R), it is, as of to date, the only type of forest carbon project eligible under Clean Development Mechanism (CDM) of the United Nations Framework Convention on Climate Change (UNFCCC); and (ii) forest conservation which includes Reducing Emission from Deforestation and Forest Degradation (REDD or REDD+²), a creation of UNFCCC Conference of Parties (COP), involves an integration of prevention of deforestation and forest degradation, and co-benefiting other than carbon sequestration, such as enabling local communities in sustainable forest management and conservation by job creations and incentives (if any).³

¹[https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/WKP\(2021\)17&docLanguage=En](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/WKP(2021)17&docLanguage=En)

² With the “plus” referring to “the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries”.

³[https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/WKP\(2021\)17&docLanguage=En](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/WKP(2021)17&docLanguage=En)

Forest carbon project's verification and market

A forest carbon project, like other carbon projects, must go through verification process on the project capacity and offset volume before any forest carbon offsets or credits could be issued by the project and traded in the compliance market or voluntary market, subject to the mechanism/framework of the project. Such verification process takes years to complete.

Compliance market refers to the market for carbon offsets trading between one country/entity with another in which the parties are mandated to account for their GHG emissions by national, regional, or international laws. Kyoto Protocol established 3 mechanisms for compliance market, CDM is one of the 3, and the only mechanism allows participation of developing countries, Vietnam being one of it. For avoidance of doubt, the developing countries in the foregoing referred to the countries set out in Annex 1 of Kyoto Protocol.⁴ The CDM enables the developed countries to fund carbon projects and receive carbon offset or credits, namely the Certified Emission Reduction (CER) issued by the projects from developing countries.



As to voluntary market, it refers to the mechanism where entities or individuals acquire carbon offsets or credits under voluntary basis without being mandated by any laws, on an over the counter (OTC) marketplace. Broker usually involved in voluntary market to facilitate the transaction based on its market know-how and know-who. Majority of the developing countries' forest carbon project

offsets or credits traded in voluntary market, due to underdeveloped or unavailable of domestic compliance market, and CDM is the only Kyoto Protocol's compliance mechanism available to developing countries, which limited to A/R project only.

REDD+ is a globally covered forest conservation type of forest carbon projects and its verification standards vary on the scales of projects. Verified Carbon Standard (VCS) is widely used on specific forest-based projects (boundary limit to a certain piece of forest) with the issued credits as Verified Carbon Unit (VCU). Whereas the Forest Carbon Partnership Facility's (FCPF) Carbon Fund, a World Bank administered multiparticipant trust fund aims to generate carbon credits through jurisdictional REDD+ programs involve national and subnational territorial project (put into Vietnam perspective, cross-provinces/multiple provinces forests).

The gold of all carbon credits

According to World Bank's 2022 carbon pricing report, average nature-based carbon credit price in standardized contract increased to approximately USD 15 per MTCO_{2e} on the beginning of Q1 2022; whereas renewable energy carbon credit on the same period has the average price of slightly above USD 5 per MTCO_{2e}. The same report has highlighted that the total volume of carbon offset or credit issuances from forest carbon projects increased 159% over the past year, accounting for more than a third of total credit issuances in 2021. The surge of demand, which is vastly due to the after-effect of COP 26, has facilitated the pricing hike of average forest carbon project credit globally.

Note that price of forest carbon project credits or offsets in voluntary market is reportedly traded in a lower price compared to compliance market, for example, the price of REDD+ project credits usually trade at a discount if compared to other nature-based projects such as A/R, which involve higher costs.⁵ On the other hand, the price of REDD+ project credits per se varies from one and another, it depends on the project size, location,

⁴ <https://unfccc.int/process/parties-non-party-stakeholders/parties-convention-and-observer-states>

⁵ <https://www.spglobal.com/commodityinsights/en/market-insights/blogs/energy-transition/062821-voluntary-carbon-markets-redd-credits-forest-protection>

and the extensiveness of the co-benefit (the impact to the indigenous or local communities), marketing results of, and environmental, social, and corporate governance (ESG) impacts to the buyers.

The Present of the Forest Carbon Project

Why forest carbon project matters in Vietnam?

Vietnam, with close to half of its approximate 310,000 km² land area being covered by forests,⁶ enjoys the natural gift of forest resources. However, rapid industrialization and recent economic miracles have created the by-products, namely deforestation and forest degradation. According to Global Forest Watch, from 2000 to 2021, Vietnam losses 137,00 ha of natural forest.⁷ Forest fire, forestland conversion, logging, and lack of support in forest management contributes to the staggering deforestation rate.

Forest protection laws have been put in place by Vietnamese government in the recent years, such as passing the Law on Environmental Protection in 2020 and the Law on Forestry in 2017. However, legislative level changes per se may not be sufficient to combat deforestation and forest degradation, ground action in forestation will be required. Hence, forest carbon project comes in as part of the solutions and provide Vietnam the much-needed fund for forestation activities. Part of the reasons for state-sanction/approved deforestation or forest degradation, such as forestland conversion, is to make way for economic development. If forestation activities are economically sustainable or at least viable, deforestation rate will be mitigated.

On the state-level, forest carbon project provides funds to the government agencies for forestation policies implementation. On the communities-level, forest carbon project creates jobs on forestation for the forestland users, either the indigenous or local communities of the forestland, as a method to subsidize or secure the livelihood of the

communities. As a result, demote and prevent unsustainable utilization of the forestland, such as for industrial agriculture or logging activities.

Who owns the forest carbon project offset in Vietnam?

As of to date, Vietnamese law does not explicitly set out the carbon ownership.⁸ However, based on the existing forest carbon projects in Vietnam, it seems that interpreting the ownership has been widely made according to the Land Law and Law on Forestry, namely an asset (the carbon) attached to the land which ownership vested on the state on behalf of all people of Vietnam. It is assumed that the government is the overall owner of the carbon resource and hence the owner of a carbon offset or credit titles of the forest carbon project on behalf of the people. Ministry of Agriculture and Rural Development (MARD) is the designated management body of forestry on behalf of the state, thus, MARD has the right to manage the carbon resource and carbon offset.⁹ Organizations, households, individuals, or communities which have been allocated by, or leased the land use right from the state on a piece of forestland are defined as “forest owners” under the Law of Forestry.¹⁰ In event of a forest carbon project includes the forestland of forest owners, the carbon resource and carbon offsets or credits in general are viewed as under the right of the forest owners.



⁶ <https://www.forestcarbonpartnership.org/country/vietnam>

⁷ <https://www.globalforestwatch.org/dashboards/country/VNM/?category=summary&location=WyJib3VudHJ5liwiVk5NIi0%3D&map=eyJkYXRhc2V0cyI6W3siZGF0YXNldCI6InBvbGI0aWNhbc1ib3VvZGFyaWVzliwibGF5ZkZjZjlpblmRpc3B1dGVkLXBvbGI0aWNhbc1ib3VvZGFyaWVzliwicG9saXRpY2FsLWJvdW5kYXJpZXMlXSwiYm91bmRhcniOnRydWUslm9wYWNpdHkiOjEslm9wYWNpdHkiOnRydWV9LHsiZGF0YXNldCI6InRyZyUtY292ZXltbG9zcyIsImxheWVycyI6WVJ0cmVILWNvdmVvLWxvc3MiXSswib3BhY2I0eSI6MSwidmlzaWJ>

[pbGI0eSI6dHJ1ZSwidGltZWxpbnVQYXJhbXMiOnsic3RhcncREYXRlljoiMjAwMS0wMS0wMSIsImVuZERhdGUlOilyMDIxLTEyLTMxliwidHJpbUVuZERhdGUlOilyMDIxLTEyLTMxIn0slm9wYWNpdHkiOnRydWV9LHsiZGF0YXNldCI6InRyZyUtY292ZXltbG9zcyIsImxheWVycyI6WVJ0cmVILWNvdmVvLWxvc3MiXSswib3BhY2I0eSI6MSwidmlzaWJ](https://vov.vn/kinh-te/thi-diem-kinh-doanh-tin-chi-carbon-rung-quang-nam-du-thu-tu-5-10-trieu-usd-post954883.vov)

⁸ <https://vov.vn/kinh-te/thi-diem-kinh-doanh-tin-chi-carbon-rung-quang-nam-du-thu-tu-5-10-trieu-usd-post954883.vov>.

⁹ Law on Forestry 2017

¹⁰ Law on Forestry 2017, Article 2, Clause 9.

Outlook of forest carbon projects in Vietnam

As of to date, the 2009 Cao Phong Reforestation Project is the first and only A/R project in Vietnam registered under CDM.¹¹ The project is developed by Forest Development Fund, Hoa Binh.¹² Despite Vietnam being perceivably underachieved in compliance market, voluntary market wise, it has shined the world stage in the recent years.

Vietnam has been implementing at least 3 major carbon credit trade agreements on a trial basis including 2 Emission Reductions Payment Agreement (ERPA) on the emission reduction program in the north central region of Vietnam (“North Central Program”), signed by and between MARD and FCPF, both dated 22 October 2020, contracted 10,300,000 emission reduction units (in MTCO_{2e}) under the price of USD 5 per unit.¹³ The North Central Program is a jurisdictional REDD+ covers 6 north central region provinces, i.e., Thanh Hoa, Nghe An, Ha Tinh, Quang Binh, Quang Tri, and Thua Thien Hue, with 42% of the total land area of 5,144,520 ha is natural forest.¹⁴

The carbon offset sales in Vietnam at the current stage is just the tip of the iceberg for its potential in forest carbon project. According to MARD, every year, Vietnam is capable of selling 57 million carbon credits to the world market.¹⁵ It is anticipated that Vietnam will see more forest conservation or preservation carbon project, with the catalyst- Sub-decree 06/2022/ND-CP dated 7 January 2022 on the Reduction of Greenhouse Gas Emission and Protection of the Ozone Layer (“Sub-decree 06”) which we have briefly discussed in our [Carbon Projects and ASEAN: Opportunities and Challenges](#).

The Future of Forest Carbon Project

Sub-decree 06’s carbon market ecosystem

Sub-decree 06 marks a milestone of forest carbon project legal development in Vietnam. It codified the forest carbon project development obligation and the offset or credit trading right. The forest owners under the applicable law are now

responsible to develop and implement forestation measures for the purpose of offsetting the GHG emission as well as other purposes. It indicates that development of forest carbon projects of all kinds is welcomed. Sub-decree 06 confers the forest owners the entitlements to participate in domestic carbon trading exchange (CTX) and offsetting mechanisms in accordance with applicable law and international treaties.

Sub-decree 06 will facilitate the creation of domestic demand of carbon offset from forest carbon project in the mere future. Domestic establishments that fall within compulsory emission reduction category set out under Sub-decree 06, such as establishment emits 3,000 tons or more of CO₂ per year, commercial buildings with annual energy consumption of 1,000 tons of oil equivalent (TOE) or more, are required to implement mandatory emission reduction and will be allocated with GHG emission quota starting from 2026. Hence, compulsory carbon reduction establishments are now required to comply with emission reductions and quotas. Sub-decree 06 allows such establishments to acquire carbon offsets or credits for up to 10% of its allocated quotas. Hence, domestic demands of carbon credits and offsets will emerge.

Prior to 2026, any compulsory emission reduction establishments may voluntarily implement emission reduction measures or even offsetting with carbon credits. Despite Sub-decree 06 does not specified any incentives for establishments to voluntarily implement emission reduction, carbon offsets or credits acquisition for this instance may allow the purchaser to negotiate a favorable pricing before the nation-wide demands flow in upon CTX implementation and statutory allocation of GHG emission quota.

¹¹ <https://cdm.unfccc.int/Projects/DB/JACO1231473818.33/view>

¹² https://lcluc.umd.edu/sites/default/files/lcluc_documents/khoa_0.pdf

¹³ https://www.forestcarbonpartnership.org/system/files/documents/FCF_ERPA_Tranche%20A-B_Vietnam_Signed.pdf

¹⁴ https://www.forestcarbonpartnership.org/system/files/documents/00_FINAL%20ER-PD%20Vietnam%205%20Jan%202018_0.pdf

¹⁵ <https://thoibaonganhang.vn/ban-tin-chi-carbon-rung-tiem-nang-khong-de-khai-thac-125364.html>.

City forest carbon project



With population growth rate close to 1% per annum,¹⁶ Vietnam would reach 100 million population by 2025. According to General Statistic Office of Vietnam, as of 2021, the population density rate is 297 people per square kilometer,¹⁷ one of the highest in the world, whereas urbanization growth rate by area is 1% per annum from 2010 to 2020.¹⁸ Land scarcity amid of the urbanization growth is pressuring the state in balancing forestation and urbanization, creating challenges to forest carbon project development in Vietnam. However, forestland is not the only area for forest carbon project development. Urban areas have now been locked in for its potential of developing forest carbon project due to its high value credit that could be generated.

In early 2022, city forest carbon project credits have sold at the price of USD 34 and USD 45 per MTCO₂e, highest among the forest-based carbon project credits in voluntary market at the time. Such acquisition is made by a blockchain carbon asset marketplace which locked in 3,100 MTCO₂e from the King Country Forest Carbon Program, a project involves forest improvement and conservation in Seattle, United States of America.¹⁹ The sales will provide the county funds to carry out the operation of the program.

Ho Chi Minh City (HCMC) could be one of the potential urban areas to develop city forest carbon project. A study claimed that the HCMC's vegetation could potentially absorb 84,732.77 tons of CO₂ per day with its suburb districts, Gan Gio and Chu Chi District, having sizable forest, are the GHG sink for entire HCMC.²⁰ Credits or offsets that could be generated from such project is not only value based on the carbon offset/reduction volume, but also the co-benefits such as rainfall interception as a measure of flood mitigation during rainy season (in which could be partly solving the decade long flood issue in HCMC) and improve of community air quality. These co-benefits of urban forest carbon project credits bring ESG value add-on to the buyer/financier.

Integration of forest carbon project into city planning

The city forest carbon project could be potentially, alongside with green buildings and/or renewable energy carbon project, integrated as part of green city plan. Resolution No.6-NQ/TW dated 24 January 2022 on Planning, Construction, Management, and Sustainable Development of Urban Areas in Vietnam until 2030, with Vision Toward 2045, has set the directions and visions for provincial and central committees to, among others, transform Vietnam's urban areas into green, sustainable, and adaptive to climate changes. Green city study and masterplan for new or re-development of estates are expected to be seen across the cities in Vietnam. As renewable energy, energy saving, and urban greening should be the substantial elements to form a green city, thus, city planner and developer may consider the opportunity of developing the carbon projects to raise revenue from climate actions.

¹⁶ <https://www.gso.gov.vn/en/px-web/?pxid=E0220&theme=Population%20and%20Employment>

¹⁷ <https://data.worldbank.org/indicator/EN.POP.DNST?locations=VN>

¹⁸ Resolution No.6-NQ/TW dated 24 January 2022 on Planning, Construction, Management, and Sustainable Development of Urban

Areas in Vietnam until 2030, with Vision Toward 2045, issued by politburo, Article 1

¹⁹ <http://www.koreaitimes.com/news/articleView.html?idxno=112181>

²⁰ https://www.researchgate.net/publication/354726739_Comprehensive_study_on_the_amount_of_CO_2_absorbed_by_vegetation_A_case_study_in_Ho_Chi_Minh_city_Vietnam

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