

CARBON FINANCE

GREEN KEY FOR SUSTAINABLE DEVELOPMENT



MAY - 2024



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01. THE CONTEXT OF PROMOTING CARBON FINANCE

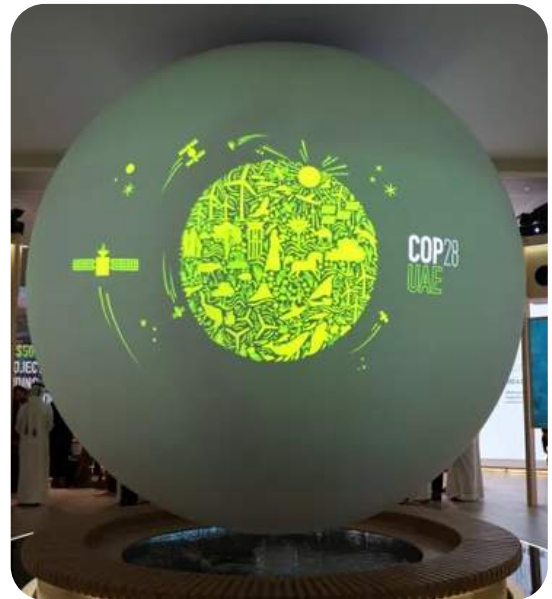


The 28th annual Climate Change Conference (COP 28)

Theme "Engagement - Action - Effectiveness"

The conference is an important step forward in the global commitment to reduce emissions and strengthen climate cooperation.

4 pillars of commitment at COP 28: Energy Transition, Climate Finance, People's Livelihoods, Cooperation and Integration.



Gradually eliminate fossil fuels. Triple global renewable energy capacity by 2030, accelerating efforts to reduce coal use and clean up industries that are difficult to decarbonize.

Strengthen commitment to climate finance includes increasing resources for the Green Climate Fund and a number of other funds to promote transition support activities.



Achieve comprehensive and international commitments in the fields of energy, food, emission reduction, and biodiversity improvement to solve climate problems.

Focus on cooperation and diversification of partnerships between countries and stakeholders such as businesses, societies, people, and international organizations.

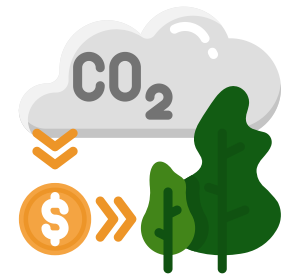
02. CARBON CREDIT



Carbon Credit

Also known as "Carbon credit" is a unit of measurement used to determine carbon dioxide (CO₂) emissions and other greenhouse gas emissions that an individual, organization, or country creates. Carbon credits are considered tradable permits or certificates that give the credit holder the right to emit one ton of carbon dioxide or the equivalent of another greenhouse gas.

Each carbon credit ~ represents the right to emit one ton of CO₂ or another greenhouse gas equivalent to 1 ton of CO₂ (tCO₂e) into the atmosphere.



Carbon Credit price

| Carbon type price | | | |
|---|-------------|--------------------|------------------|
| | Amount sold | Average price (\$) | Price range (\$) |
| Wind | 12.8 | 1.9 | 0.3-18 |
| REDD+ | 11 | 3.3 | 0.8-20+ |
| Landfills bury methane gas | 7.9 | 2 | 0.2-19 |
| Plant trees | 3 | 7.5 | 2.2-20+ |
| Environmentally friendly cooking stove | 3 | 4.9 | 2-20+ |
| Hydropower | 1.5 | 1.4 | 0.2-8 |
| Filter water | 1.2 | 3.8 | 1.7-9 |
| Forest improvement management | 0.8 | 9.6 | 2-17.5 |
| Biomass/Biochar | 0.7 | 3 | 0.9-20+ |
| Energy efficiency, mainly in industry | 0.7 | 4.1 | 0.1-20 |
| Biogas | 0.6 | 5.9 | 1-20+ |
| Community-centered energy efficiency | 0.6 | 9.4 | 3.3-20+ |
| Transport | 0.5 | 2.9 | 2.2-6.8 |
| Fuel conversion | 0.5 | 11.4 | 3.5-20+ |
| Solar energy | 0.3 | 4.1 | 1-9.8 |
| Methane reserves | 0.2 | 7 | 4-20+ |
| Geothermal | 0.1 | 4 | 2.5-8 |
| Combination of agriculture and forestry | 0.1 | 9.9 | 9-11 |

Source: 8 BillionTrees.com

The importance of Carbon credits

Strengthening compliance with Legal Regulations

- Compliance with carbon emission regulations is a mandatory requirement for businesses in some countries.
- Using Carbon Credits helps businesses avoid legal and financial risks that may arise from violating these regulations.

Creating momentum for sustainable development

- By reducing carbon emissions, businesses not only contribute to reducing climate change but also promote sustainable development of themselves and the community.
- The use of carbon credits is part of building a sustainable business strategy and brings long-term benefits to business and society.

Providing economic incentives for businesses

- Carbon markets motivate businesses to invest in economic activities towards more sustainable practices (afforestation, forest protection), switching to renewable energy sources and lower-emission production methods.
- Encourage international cooperation in addressing climate change, helping developing countries have more resources to implement their climate commitments.

Improving efficiency and saving costs

- Effective management of carbon emissions can lead to optimized use of raw materials and resources, improving energy efficiency and production processes.
- This not only helps businesses minimize their impact on the environment, but also helps them save operating costs and increase profits.



03. CARBON MARKET



Carbon Market History

The carbon market is a resource-generating mechanism to promote the reduction of greenhouse gas emissions and the transition to a carbon-neutral economy.

➤➤➤ The Carbon Market originates from the United Nations Kyoto Protocol on climate change adopted in 1997. The content of the Kyoto Protocol stipulates that countries with excess emissions rights can sell to or buy back from countries that emit more or less than the adopted commitment target.

➤➤➤ The carbon market, also known as the carbon credit exchange market, is a type of market that allows organizations to buy, sell and trade the right to emit greenhouse gases. Companies, organizations or individuals can use carbon markets to offset greenhouse gas emissions by purchasing carbon credits from entities that eliminate or reduce greenhouse gas emissions.

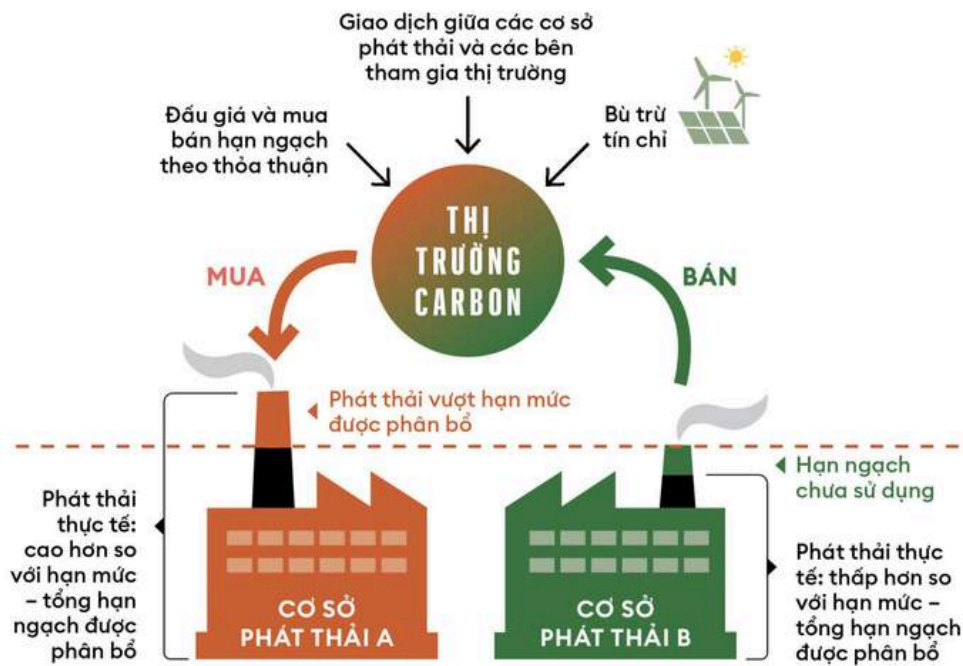


| | Tự nguyện | Bắt buộc |
|------------|---|---|
| Trong nước | <p>Tổ chức, cá nhân trong nước tự nguyện tham gia bù đắp phát thải của mình hoặc mua tín chỉ để hỗ trợ các dự án GPT/ loại bỏ KNK, ví dụ thị trường ở Thái Lan, Malaysia, Hồng Kông</p> | <p>Các ngành hoặc tổ chức thuộc một số lĩnh vực nhất định phải tuân thủ các quy định của chính phủ hoặc bắt buộc phải tham gia thị trường carbon trong nước, ví dụ như thị trường ở Hà Quốc, Úc</p> |
| Quốc tế | <p>Tổ chức, cá nhân từ các quốc gia khác nhau tự nguyện tham gia bù đắp phát thải của mình hoặc mua tín chỉ để hỗ trợ các dự án GPT/ loại bỏ KNK</p> | <p>Tổ chức từ các quốc gia khác nhau trao đổi hạn ngạch phát thải và tín chỉ carbon để hoàn thành các nghĩa vụ về khí hậu trong 1 hệ thống hoặc khuôn khổ quốc tế</p> |

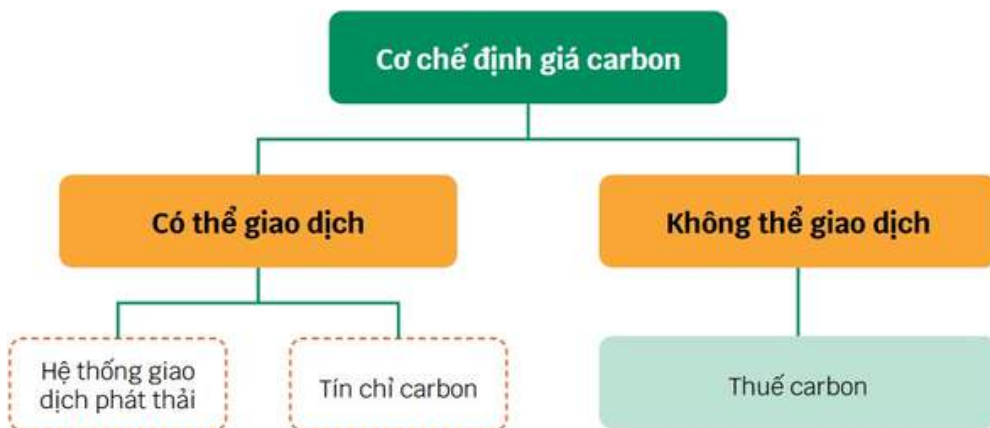
Mandatory Carbon Market - MCM

This is a market in which the trading of carbon credits is based on commitments made by countries within the framework of the UNFCCC to achieve greenhouse gas emission reduction targets.

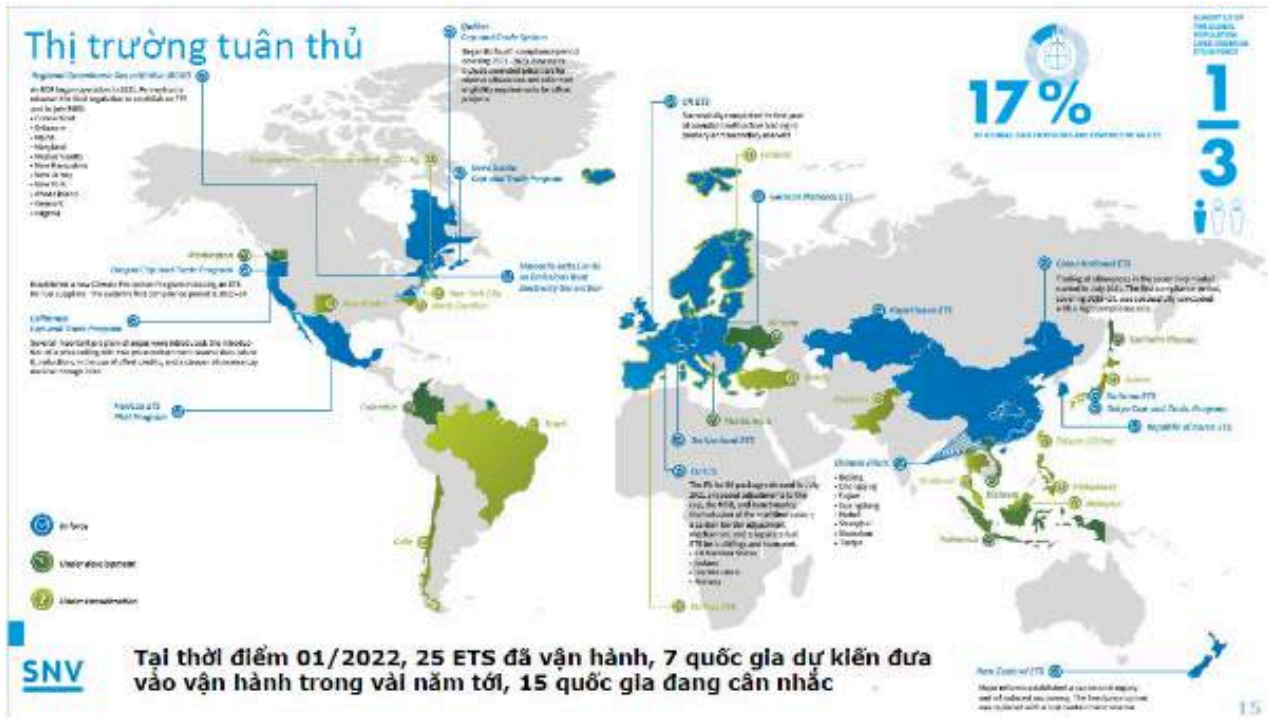
This market is mandatory and is mainly for projects in the Clean Development Mechanism (CDM), Sustainable Development Mechanism (SDM) or Joint Implementation Mechanism (JI).



Businesses exchange and trade surplus and deficit emissions units with each other



Carbon pricing tools



01

Total Emission Limit (Cap)

The government or regulatory agency will determine the maximum amount of greenhouse gases allowed to be emitted. This limit will gradually decrease over time to ensure the system's effectiveness in reducing emissions.

02

Issuance and Distribution of Credits

Governments allocate corresponding quotas (credits) to facilities that emit emissions. Quotas can be allocated free of charge based on a business's emissions history/average emissions intensity or auctioned.

03

Carbon Credit Transactions

Businesses allocated quotas can exchange credits with each other, creating flexibility for businesses and ensuring total emissions within the allowed limit.

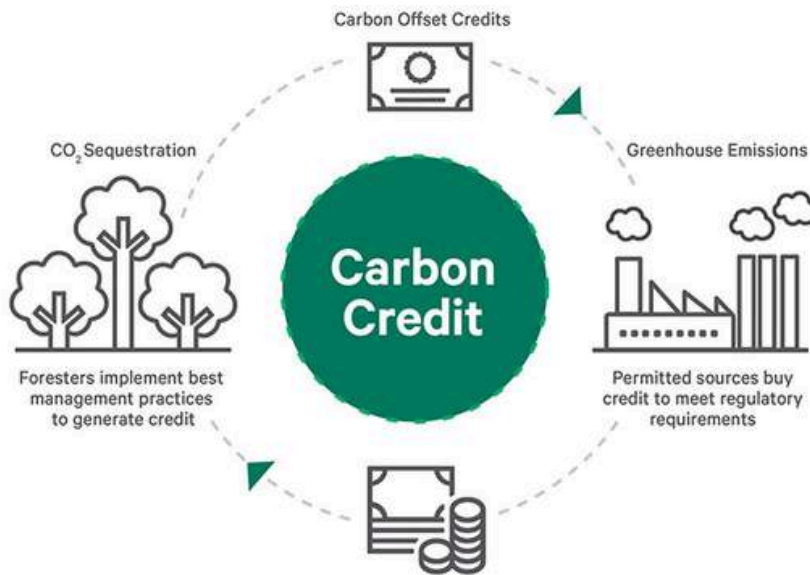
04

Compliance

Businesses must demonstrate that they have sufficient emissions rights for all of their emissions within a given reporting period (usually each year) to avoid facing fines.

Voluntary Carbon Market - VCM

This is a market based on bilateral or multilateral cooperation agreements between organizations, companies or countries. The market allows organizations and businesses to buy and sell carbon credits - providing an opportunity for emitting companies to offset their emissions



1

Project Development

Projects to reduce, avoid or absorb emissions (such as afforestation, renewable energy or methane capture projects) are developed. Each project must be verified and tested to ensure it provides real emissions reductions.

2

Certificate of Credit

Once accredited, developed projects generate credits, each equivalent to one ton of CO2 equivalent reduced or absorbed.

3

Credit Transactions

Carbon credits can be sold on a voluntary market to businesses or individuals who want to offset their carbon emissions. The price per Carbon credit varies widely depending on project type, location, and benefits.

4

Credit Cancellation

Once issued and purchased by businesses, the credits are “cancelled” to offset the purchaser's emissions, ensuring each credit can only be used once.

Current organizations certifying Carbon credits



VERRA's Verified Carbon Standard (VCS), introduced in 2007, now accounts for 90% of transactions. VCS is often used to develop projects and confirm forest carbon credits generated from newly planted forests, replanting large timber forests, planting special-use forests and protection forests, and restoring natural forests; reduce emissions from combating deforestation and forest degradation; Wetland restoration and conservation.



Gold Standard (GS), founded in 2003, is a prestigious international standard for projects that reduce greenhouse gas emissions, including REDD+ projects. Developed by the International Union for Conservation of Nature (WWF) and the South Pole Group, the Gold Standard stands out for its rigorous requirements, ensuring the sustainability and overall positive impact of awarded projects. certification.



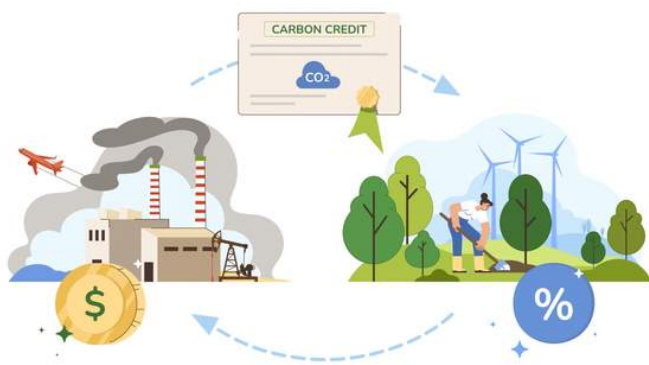
The American Carbon Registry (ACR), formerly known as the US Registry, is a nonprofit organization of Winrock International that operates as the leading voluntary carbon credit registration and verification program in the United States. ACR not only focuses on REDD+ projects but also includes other greenhouse gas emission reduction projects in sectors such as energy, industry and agriculture.

04. IMPLEMENTATION OF CARBON MARKETS IN THE WORLD AND VIETNAM



The world's vibrant carbon credit market

In the world today, there are **58 countries** developing carbon markets, operating extremely actively, especially in **Asia, Australia and North America**. **27 countries** have a carbon tax, and some have both. These countries have built carbon credit trading floors and have had many transactions, generating huge revenues, creating a trend for countries that have not yet participated in the carbon market.



Emission reduction projects, such as renewable energy and methane emission reduction projects with **66.88%** of total market revenue by **2022**.

Europe is the world's largest carbon market, accounting for **89.56%** of revenue in **2022**, mainly from the **EU Emissions Trading System (ETS)**. The carbon market is expected to reach **2.69 trillion USD** with the highest growth rate of **18.23%** in the period **2023 - 2028**.

Several carbon credit exchanges in the world

| | |
|--|--|
| <p>EU Emissions Trading System (ETS)</p> | <p>From October 2023, 27 EU member countries have begun imposing carbon taxes on six types of imported goods with high risk of pollution: iron and steel, cement, fertilizer, aluminum, electricity and hydrogen.</p> |
| <p>California Cap-and-Trade Program Exchange</p> | <p>This is an exchange in the state of California, USA, and is part of the Western Climate Initiative, which also includes Canadian provinces.</p> |
| <p>Japan Carbon Credit Trading Scheme (J-Credits)</p> | <p>The carbon credit exchange “J-credits” opened on October 11, 2023 on the Tokyo Stock Exchange (TSE). Initially, 188 Japanese companies and organizations participated in buying and selling government-verified carbon credits through the use of renewable energy and forest management.</p> |
| <p>China National Emissions Trading Scheme platform</p> | <p>China began testing its national carbon credit trading system in 2021, with plans to scale it up in the future.</p> |

The carbon credit market in Vietnam is young but full of promise

Currently, the Government has just issued **Decree No. 06/2022/ND-CP** dated January 7, 2022 regulating greenhouse gas emissions mitigation and ozone layer protection, which stipulates the development roadmap and implementation time. domestic carbon market and implementation of domestic and international credit exchange projects.

According to the project "**Developing the carbon market in Vietnam**" from now until the end of **2027**, Vietnam focuses on building regulations on carbon credit management, activities of exchanging greenhouse gas emission quotas and carbon credits; Develop regulations for operating the carbon credit exchange.



The domestic carbon market will be piloted from 2025. From 2028, the official carbon credit exchange will be operated; regulates activities connecting and exchanging domestic carbon credits with regional and world carbon markets.

Promoting carbon credit projects

The year **2023** marks a very important milestone when, for the first time, Vietnam's forestry industry successfully sold **10.3 million forest carbon credits** through the World Bank (WB). With a credit selling price of 5 USD/ton of absorbed carbon, the revenue is **51.5 million USD** (nearly **1,250 billion VND**). The WB has paid the first instalment of ERPA to the Ministry of Agriculture and Rural Development of **41.2 million USD** (equivalent to **997 billion VND**), achieving **80%** of the emission reduction results according to the signed purchase contract. The remaining amount of **10.3 million USD** will be paid after completing the transfer of the remaining **10.3 million tons of CO2**.

This is the result of the implementation of the North Central Region Greenhouse Emissions Reduction Payment Agreement (ERPA) signed on October 22, 2020 between the Ministry of Agriculture and Rural Development and the National Bank for Reconstruction and Development (IBRD) belongs to the World Bank group.

VIỆT NAM ĐÃ NHẬN ĐỦ KHOẢN CHI TRẢ 51,5 TRIỆU USD TỪ VIỆC CHUYỂN NHƯỢNG 10,3 TRIỆU TẤN CO2

(VÙNG BẮC TRUNG BỘ GIAI ĐOẠN 2018-2024)



Source: Ministry of Agriculture and Rural Development

Proceeds from selling forest carbon credits will be used to pay forest owners assigned to manage natural forests, commune-level People's Committees and other organizations assigned by the State to manage natural forests. Other subjects have activities related to the implementation of forest protection and development activities, contributing to reducing deforestation, forest degradation and increasing income and improving livelihoods for people working in the forest.

By 2028, Vietnam will officially operate a voluntary carbon credit exchange. At that time, businesses can purchase additional carbon offset credits to achieve the Net Zero goal. The current period is when businesses need to carry out emissions inventory reports according to Vietnamese and world regulations to limit legal risks and seize opportunities from the "green supplier" shift. is happening on a global scale.

“REACH OUT TO US TODAY, AND TOGETHER, LET'S SHAPE A BETTER TOMORROW”

Giant Barb is a pioneer in the field of Carbon Finance in Vietnam, offering comprehensive services such as Greenhouse Gas Inventory, ESG Reporting, and Carbon Credit Market solutions to both domestic and international enterprises.

With the motto "Towards a low carbon society", Giant Barb connects individuals, investors, businesses, and governments together to build green projects aimed at carbon neutrality, contributing to global efforts in combating climate change.

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**Together, we can make a
difference that transcends
boundaries and leaves a positive
legacy for generations to come.**

