

FINANCE

SUSTAINABLE

Companies and carbon neutrality: initial conclusions and issues identified

October 2021

The Climate
and Sustainable
Finance Commission



This document is the result of discussions, research and exchange with experts conducted by a working group set up in March 2021 and composed of members of the AMF Climate and Sustainable Finance Commission. The Climate and Sustainable Finance Commission is made up of financial market participants, companies, academics, experts and representatives of civil society. Its role is to help the AMF carry out its regulatory and supervisory duties on topics related to sustainable finance. The Commission is responsible for providing technical expertise and insights into changes in the market and practices, as well as new emerging challenges. It provides a forum for dialogue that should contribute to the effective mobilisation of the financial sector in the face of climate risk. Since its creation, the Commission has worked on corporate extra-financial reporting and the principle of double-materiality, as well as on the role of ESG (environmental, social and governance) rating agencies and data providers. The Commission also provides opinions on draft AMF reports and guidance, and contributes to the work done by the AMF in collaboration with the Autorité de contrôle prudentiel et de résolution (ACPR) to monitor and assess the climate commitments of French financial institutions.

The AMF has five other consultative commissions ("Disclosures and Corporate Finance", "Markets and Exchanges", "Clearing, Custody and Securities Settlement", "Asset Management and Institutional Investors" and "Retail Investors"), each of which is made up of some twenty experts, to promote dialogue and consultation with stakeholders.

The AMF was involved in the work of the CCFD's working group. The findings reflect the analyses and thoughts of the members of the AMF's Climate and Sustainable Finance Consultative Commission and are intended to feed the debate and advance the common understanding of the challenges around carbon neutrality.

Companies and carbon neutrality: initial conclusions and issues identified

October 2021

Purpose of the document: This working document aims to provide an initial perspective on the carbon neutrality approaches deployed by companies, the resulting measures, and how to report on the efforts undertaken. It has an educational aim, attempting to clarify the terminologies and levers for action, while identifying some good practices. It may be amended and completed afterwards, due to the changing nature of the concepts employed and their use, and discussions and methodological studies in progress. The notions presented therefore reflect the state of the practices and knowledge at the time of publication.

This document is intended both for companies when working out their climate strategy, and investors, when assessing the measures introduced by companies. It does not, however, deal with the methodological issues faced by investors implementing decarbonisation or carbon neutrality strategies for their portfolios.

Context: This document was prepared by a working group of the AMF Climate and Sustainable Finance Commission. It was written in the context of an increase in the number of carbon neutrality commitments by companies in varied sectors, in France and abroad. These commitments meet the need for rapid and ambitious action to combat climate change, a need once again emphasised in the latest report by the Intergovernmental Panel on Climate Change (IPCC).¹ These commitments are addressed individually or in connection with public initiatives such as Race to Zero (under the auspices of the United Nations), or private initiatives such as The Climate Pledge, Transform to Net Zero, or in France the Net Zero Initiative (NZI). They also reflect increasing pressure by shareholders and coalitions of investors such as the Net Zero Asset Owner Alliance (NZAOA) (also under the auspices of the United Nations) on companies, which are called upon to step up and accelerate their contribution to combating global warming. The scope of these commitments varies from one company to another.

The increase in the number of commitments by companies regarding carbon neutrality is accompanied by an increased interest in the voluntary carbon market. Work is therefore taking place at the international level to structure and expand this market, which represents an essential but currently still limited tool for financing the transition. Issues relating to the structure of the voluntary carbon market are only briefly mentioned in this document, which treats it as a tool used by companies in their approach. Nevertheless, these issues are decisive and may be the subject of further analysis.

¹ IPCC, Assessment Report 6 (AR6), B.1 (August 2021): “Global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in carbon dioxide (CO₂) and other greenhouse gas emissions occur in the coming decades.”

This document also mentions the difference between the carbon offsetting approach, introduced voluntarily by companies, and compliance by the companies concerned with the legal obligations imposed, in particular by the European Union Emissions Trading System (EU ETS). This market currently covers about 40% of the greenhouse gas (GHG) emissions of the European Union and aims to gradually reduce the total level of emissions in Europe. To achieve climate neutrality in the EU by 2050, in July 2021 the European Commission proposed to revise and broaden the scope of the ETS. Other sectoral measures are also proposed in connection with the European Green Deal and the Fit for 55 package of proposals. These new constraints which may be imposed on companies, are also not discussed in this document, even if they will of course have an impact on the decarbonisation measures and pathways of the companies concerned.

Scope of the analysis: The analysis focusses on levers for action available to companies to work out a strategy contributing to carbon neutrality. At this stage, it does not look at the implications for other environmental objectives (in particular the principle of “do no significant harm” defined by Article 17 of the European Taxonomy Regulation)² or social objectives (“just transition”) which must also be taken into consideration by companies when working out their transition plan. Finally, it is stated that the European Taxonomy Regulation aims to achieve carbon neutrality, in particular by establishing and regularly updating the technical screening criteria for the environmental objective of climate change mitigation, as specified in recital 41 of the Regulation. It may therefore provide a reference for companies to define their commitments to carbon neutrality in concrete terms, whether by changing their business model, or in their operating expenses and investments, and for investors to assess the measures taken by companies. However, this link is not discussed directly in this document. Similarly, some companies use an internal carbon price in their operations or to guide their investment choices. This lever can then help decisions to reorient companies' business models towards a trajectory compatible with a low-carbon economy, but is not discussed here.

Terminology: From a scientific point of view, to reduce global warming linked to human activity it is necessary to limit aggregate emissions of carbon dioxide (CO₂) in order to achieve net CO₂ emissions at least equal to zero, as well as to significantly reduce emissions of other greenhouse gases (GHG). According to the IPCC, the term “carbon neutrality” refers solely to carbon dioxide. The term “net zero emissions” refers to all greenhouse gases and their precursors, reduced to an equivalent quantity of CO₂ according to an equivalence metric. For the purpose of simplicity, both terms are used here to refer to all GHG, with occasional exceptions, in particular referring to carbon sinks. A glossary is provided in the appendix, which provides IPCC definitions in particular.

² Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment.

Summary of the initial conclusions:

- If defined rigorously and transparently, a carbon neutrality approach can create motivating dynamics in companies, and provide a demanding framework for their commitments.
- It involves principally and above all a reduction in absolute terms in greenhouse gas (GHG) emissions by the company throughout its value chain, based on regularly revised objectives in line with scientific knowledge, with an initial stage by 2030 or before.
- Companies can also contribute to carbon neutrality by increasing carbon sinks or emissions avoided by other entities. These measures must be taken first and foremost in their value chain. In the case of carbon sinks, companies must take into consideration the different limits and benefits of the various biological, geochemical or technological processes involved. In the case of avoided emissions, their recognition by companies depends on the choice of baseline scenario, which must therefore be based on robust and transparent assumptions that enable a cautious evaluation.
- If companies decide to finance emissions sequestration or reduction projects outside their value chain, the quality of the project is a central issue and several criteria must be met to ensure the integrity of the approach. This financial contribution must be seen as a means of increasing companies' level of ambition.
- To reflect the physical reality of GHG flows and facilitate management, companies must set themselves distinct targets and report separately on the different measures taken (reduction in emissions, increase in carbon sinks and avoided emissions in the value chain, financial contribution).
- Finally, the nature and scale of the transformations involved, and the measures possible to contribute to global carbon neutrality, differ from one sector to another, even if all sectors are concerned. It is therefore the company's overall approach that must be assessed, not just its "neutrality" objectives.

1. CARBON NEUTRALITY IS A COLLECTIVE AIM THAT CALLS FOR THE MOBILISATION OF ALL COMPANIES

The central aim of the Paris Agreement is to strengthen the global response to the threat of climate change by holding the increase in the global temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C. Within this framework, carbon neutrality at the global level is essential for compliance with the remaining carbon budget, defined in terms of absolute value by the IPCC to limit global warming at 1.5°C.³

From a scientific point of view, carbon neutrality is therefore a collective objective, defined on a global scale,⁴ and equivalent to an objective of net zero emissions. Companies nevertheless refer to it increasingly frequently⁵ to describe objectives with diverse aims and natures, within different timescales.

Companies have **several levers for action to contribute to global carbon neutrality**. It is necessary for companies to specify these measures and establish priorities in order to define a strategy suited to the challenges involved, taking into account the elements specified in the remainder of this document. **Under these conditions**, such an approach may then make it possible to create **motivating dynamics** within companies and provide a demanding framework for their commitments to combating global warming and in their dialogue with investors and other stakeholders.

2. COMPANIES MUST CONTRIBUTE TO THE COLLECTIVE OBJECTIVE FIRST AND FOREMOST BY REDUCING THEIR GHG EMISSIONS (CARBON FOOTPRINT) ACCORDING TO A PATHWAY IN LINE WITH SCIENCE AND COVERING A RELEVANT PART OF ITS BUSINESS

To reduce a company's impact on global warming, the first and main stage is to reduce its carbon footprint in absolute terms, throughout its value chain (direct GHG emissions (*scope 1*), indirect GHG emissions linked to energy (*scope 2*) and other indirect GHG emissions (*scope 3*)). Depending on the business sector, levers for reducing GHG emissions may involve, among other things, energy sources, industrial processes, transport of materials or products, waste management and recycling, as well as emissions linked to the use of products by customers, for example, by developing less emissive thermal engines. Depending on the case, these reduction efforts can be carried out in conjunction with the company's suppliers or customers. When possible, efforts to reduce emissions must be completed by actions aimed at increasing carbon sinks on the one hand, and increasing avoided greenhouse gas emissions on the other hand, both within and outside the company's value chain (see below).

³ Consequently, the IPCC states that by calculating the average air temperature at the surface of the earth, we obtain the remaining carbon budget (calculated from 1 January 2020) estimated at 300 GtCO₂ with a probability of 83% of managing to limit global warming to 1.5°C, and at 400 GtCO₂ with a probability of 67% (1 150 GtCO₂ and 900 GtCO₂ respectively for warming limited to 2°C) (IPCC, AR6, Technical Summary, TS.3). Over the period 2015-2019, the IPCC estimates that a total of about 210 GtCO₂ were emitted.

⁴ Although carbon neutrality is only really meaningful on a worldwide scale, States that are collectively involved via the Paris Agreement can also adopt this objective at the level of national strategies (see ADEME 2021). This change of scale nevertheless creates biases compared with the global definition, and requires additional precautions. The French National Low-Carbon Strategy (SNBC) therefore forbids the purchase of international carbon credits and includes a strong policy to reduce France's imported emissions. In its latest report, the IPCC notes the increasing reference to the concept of carbon neutrality at different levels (national, sectoral, company-level or business-level), while emphasising the issues of coherence according to the level considered, and of accounting.

⁵ In March 2021 at least one in five of the 2,000 largest companies in the world had made commitments to net zero emissions (source: Energy & Climate Intelligence Unit/Oxford Net Zero, March 2021). These commitments represent in particular between 60% and 70% of global production of heat and cold, road vehicles, electricity and cement, but with varying scopes (source: IEA, 2021, p. 30). In April 2021, 21 companies listed on the CAC40 and 41 companies on the SBF120 were deploying a carbon neutrality approach (source: AMF).

Companies' decarbonisation strategies must involve first and foremost setting **objectives to reduce GHG emissions before 2050**. A demanding approach involves:

- **Knowing, understanding and taking into account, in the carbon neutrality strategy, all relevant and significant categories of the company's emissions**, *i.e.* direct (*scope 1*) and indirect (*scopes 2 and 3*) GHG emissions, adopting when relevant and possible an exhaustive approach to the life cycle to cover the company's environmental impacts. Several standards (in particular ISO 14064-1) and methodological frameworks may help companies to identify and reliably measure the emissions to be taken into consideration, and report them.
- **Enable a decrease in GHG emissions in absolute terms, the aim being to reduce the concentration of GHG in the atmosphere**. If the reduction is expressed in carbon intensity, information must be provided on the unit used and the expected decrease in GHG emissions in terms of absolute value.
- Bring the objectives into line with **the most recent scientific knowledge**, e.g. via an ACT (Assessing low Carbon Transition) assessment or validation by the SBTi (Science-based Targets Initiative), making it possible to define a decarbonisation pathway (or transition plan) in accordance with the objectives of the Paris Agreement.⁶
- Define the target set for 2050 at the latest in terms of **intermediate targets**, with an initial short-term stage if relevant, in addition to a target for 2030. The timetable to be defined may vary depending on the company, according to the business sector and the timescale of the investments.
- **Dynamically** revise the targets, according to the progress of the company itself, collective progress and advances in scientific knowledge. In particular, in the event of insufficient collective or individual action to reduce GHG emissions, the level of effort to be made each year to comply with the remaining carbon budget will increase, making it necessary to revise the targets set.

The emissions reduction targets should be associated with a detailed **transition plan** as specified in the legislative proposal by the European Commission on corporate sustainability reporting (CSRD).⁷ If appropriate, these plans should include information allowing to understand the baseline scenarios taken into consideration by the company, or the sectoral decarbonisation plans the company is referring to.

While reducing GHG emissions and achieving global carbon neutrality are the result of measures to be taken by all sectors, **the nature and extent of the transformations vary from one sector to another**. Moreover, depending on the case and the economic activity concerned, the reductions in GHG emissions may be achieved by deploying technologies already available, or require the use of new technologies that are often still prototypes.⁸

The carbon neutrality strategy will therefore be more or less demanding and costly depending on the company, and reflect a contribution to the collective objective which is more or less ambitious, and subject to uncertainties. **It is the company's overall approach that must be assessed**, beyond the measures for decarbonisation and "neutrality" of its own activities. This contribution approach concerns all sectors.

⁶ See also the work on transition of the European Commission Platform on Sustainable Finance.

⁷ The legislative proposal by the European Commission published in April 2021 on corporate sustainability reporting (Corporate Sustainability Reporting Directive) refers to the Paris Agreement and provides for the reporting of information on the plans defined by companies to ensure that their business model and strategy are compatible with limiting global warming to 1.5°C as specified by the Paris Agreement. The legislative proposal also provides for the development of a reporting standard, preparatory work on which has been entrusted to EFRAG.

⁸ See IEA (2021, p. 82): "Most of the global reductions in CO₂ emissions through 2030 in our pathway come from technologies readily available today. But in 2050, almost half the reductions come from technologies that are currently at the demonstration or prototype phase. In heavy industry and long-distance transport, the share of emissions reductions from technologies that are still under development today is even higher."

3. **AS FAR AS POSSIBLE, COMPANIES MUST ALSO CONTRIBUTE TO THE GLOBAL CARBON NEUTRALITY OBJECTIVES BY OTHER MEASURES AIMED AT INCREASING CARBON SINKS OR EMISSIONS AVOIDED BY OTHER ENTITIES**

After reducing their carbon footprint across their value chain, companies can contribute more broadly to transition efforts. The company's contribution can then include measures to:

- Increase carbon dioxide sequestration capacities** within and outside its value chain **by developing carbon sinks** based on natural or technological solutions (see #5 below). The increase in carbon sinks in the company's value chain may be direct (if the sinks are held by the company) or indirect (if the sinks are put in place upstream or downstream of the company).
- Increase the greenhouse gas emissions avoided** and help other entities to reduce their emissions, within and outside its value chain (see #6 below).

Measures to increase carbon sinks and avoided emissions **should be deployed first and foremost within the company's value chain**, even if it should be noted that, once again, the opportunities for decarbonisation within the value chain depend on the company's business sector.

If the measures are aimed at the carbon sinks (see #5 below) or avoided emissions (see #6 below) outside the company's value chain, this is known as voluntary offsetting (in the form of a financial contribution), which involves the company acquiring carbon credits (see #7 below) or directly financing sequestration or avoided emissions projects.

4. **IN ORDER TO REFLECT THE PHYSICAL REALITY OF GHG FLOWS AND TO ENABLE STAKEHOLDERS TO ASSESS THE EFFORTS UNDERTAKEN AND THE RESULTS ACHIEVED, THE COMPANY MUST MANAGE AND REPORT SEPARATELY THE DIFFERENT MEASURES TAKEN THAT CONTRIBUTE TO CARBON NEUTRALITY**

Companies must set themselves targets and **report separately** the different measures taken that contribute to carbon neutrality:

- Reduction in their emissions, which must remain the priority,
- Increase in the carbon sinks in their value chain,
- Increase in avoided emissions in their value chain,
- Financing (directly or via carbon credits) of carbon sinks or avoidance projects outside the company's value chain.

In accordance with the private standards GHG Protocol and Bilan Carbone®, and the ISO 14064-1 international standard, **gross emissions cannot be reduced (netted out)** by the amounts of GHG avoided or sequestered. The reduction in a company's indirect emissions (e.g. a decrease in emissions linked to the company's purchases resulting from an improvement in the carbon performance of its suppliers) must also be distinguished from the avoided emissions enabled by the company (e.g. by marketing low-carbon products).

Similarly, **there is a difference between sequestration and avoided emissions**. Sequestration (see #5 below) involves a physical decrease in the amount of carbon dioxide in the atmosphere, whereas avoided emissions (see #6 below) involve comparison (no increase in greenhouse gas emissions) with a theoretical situation (*baseline*).

Reporting these amounts separately makes it possible to **reflect more accurately the physical reality** of GHG flows, and to **facilitate management of the strategy** and of each of the measures with regard to the scientific objectives for carbon neutrality.

5. **INCREASING CARBON SINKS IS NECESSARY BUT IS BASED ON SOLUTIONS THAT OFFER DIFFERENT BENEFITS WHICH MUST BE TAKEN INTO CONSIDERATION IN THE CHOICE OF PROJECTS**

Carbon sinks make it possible to absorb the carbon dioxide and keep it permanently out of the atmosphere (“sequestration”). Several technologies are then based on the use or recovery of these carbon sinks.

Carbon dioxide **removal** (CDR) processes comprise **various artificial biological, technological or geochemical processes** as a result of deliberate human actions, that make it possible to remove the CO₂ from the atmosphere and sequester it permanently in geological, terrestrial or ocean carbon sinks, or in products.

Firstly, **natural solutions** for CO₂ removal include, among others, afforestation and reforestation, as well as capturing the carbon in the soil via changes in land management (e.g. regenerative agriculture) which make it possible to increase the organic carbon content of the soil. Although these processes are subject to uncertainties and feasibility constraints (linked among other things to the availability of land) they make it possible to reduce the concentration of CO₂ in the atmosphere (possibly over the long term if use of the soil is not changed) and can enable negative net emissions. However, the question of the permanence of the sequestration must not be overlooked: fires or a change in the use of the soil may therefore result in the release of the sequestered CO₂ into the atmosphere, cancelling out the reduction efforts. If the increase in GHG emissions continues, the IPCC also states that this will affect the ability of natural (terrestrial or marine) carbon sinks to stem the build-up of CO₂ in the atmosphere.⁹

Alongside natural solutions for eliminating CO₂, technologies can also be used to capture CO₂, e.g. from industrial fumes from a production site. These involve (i) **technologies for the capture and use of CO₂** (Carbon Capture and Utilization - CCU) during production of chemicals, fuel and power products or materials, as well as (ii) **technologies for the capture and storage of CO₂** (Carbon Capture and Storage - CCS) making it possible to prevent it entering the atmosphere for long periods by injecting it into the subsoil. For CCU, as is stated by the IPCC, the question arises of the duration of storage in the products, and taking into account emissions from them. For CCS, the technologies are still in their infancy (at the global level only about twenty projects are in operation on an industrial scale), are very expensive and cannot all be implemented or systematically deployed. Without CCU and CCS technologies, it is unlikely we will achieve the global objective of carbon neutrality by 2050.

These different natural or technological options for sequestering CO₂ are therefore **essential** and are not mutually exclusive. As they often depend on long-term projects and remain largely to be developed, they also call for rapid mobilisation, in particular in terms of investment, without however delaying or undermining the measures taken by companies aimed at reducing GHG emissions in terms of absolute value.

In addition, these sequestration solutions all offer **different benefits** (e.g. long-term storage capacity, co-benefits in terms of biodiversity etc.) and **specific challenges** (difficulties of deployment on a large scale, possible negative impacts on other environmental or social objectives, competition regarding the use of land, investments in research and development and costs involved, level of uncertainty etc.). The choice of projects must take these different factors into consideration, giving priority to solutions that enable long-term storage. The Oxford Principles for Net Zero Aligned Carbon Offsetting classify the different sequestration solutions, giving priority to permanence and the possibility of large-scale development.

⁹ IPCC, AR6, B4.

6. **AN INCREASE IN AVOIDED EMISSIONS BY OTHER ENTITIES IS ESSENTIAL TO ACHIEVE THE COLLECTIVE AIM OF CARBON NEUTRALITY, BUT MUST BE RIGOROUSLY ASSESSED**

Avoided emissions are reductions in GHG emissions by other entities, measured in relation to a baseline scenario. They therefore do not result in a direct decrease in GHG emissions, but measure the difference between current emissions, and those that would have occurred if low carbon solutions had not been developed. This **difference with the baseline scenario** can result:

- *within the value chain*, from the development of products and services making it possible to reduce the carbon footprint of other players (e.g. supply of materials to enable the thermal renovation of buildings, development of low carbon mobility offerings, production of reconditioned electronic devices making it possible to reduce the use of virgin raw materials etc.),
- *outside the value chain*, from financing reduction projects, in particular by buying carbon credits (see below).

The methods used to choose the baseline scenario therefore have an impact when determining the level of avoided emissions. This notion is particularly complex as there is no unanimously accepted baseline scenario.¹⁰ **The method used to measure emissions**, which is based on the choice of baseline scenario, must therefore be reported. The assumptions must be robust, based on the principle of coherence and completeness, and clearly stated.

The existence of different baseline scenarios requires precautions when the avoided emissions are aggregated at portfolio, country, or global level. Furthermore, since the avoided emissions are linked to the use of a low-carbon solution/product or the implementation of a project, the question arises of who is responsible and who benefits (the user or producer of the low-carbon solution, the person who finances the project etc.), without a commonly agreed methodology at present for answering it. Depending on the situation, several entities in the value chain can claim to recover these emissions. An organisation that only makes a marginal contribution to the avoided emissions compared with the other links in the value chain should not report the avoided emissions.

Avoided emissions may therefore certainly have a genuine role in the decarbonisation of the economy, but they involve a potentially high risk of greenwashing that requires vigilance regarding the baseline scenarios used, to ensure that the projects concerned actually lead to decarbonisation.

7. **COMPANIES CAN ALSO CONTRIBUTE TO THE COLLECTIVE AIM OF CARBON NEUTRALITY BY FINANCING PROJECTS OUTSIDE THEIR VALUE CHAIN, PROVIDED THAT THEY MEET QUALITY CRITERIA**

The contribution of companies may take the form of “**carbon offsetting**”. This does not constitute a “right to emit” which would reduce or cancel the company’s residual emissions, but takes into account the voluntary financing of sequestration or emissions reduction projects **outside the company’s value chain**. Financing can be provided by buying carbon credits on the voluntary carbon market (see #8 below) making it possible to certify each tonne of GHG sequestered or avoided by an offset project, or by direct investment in such projects. In both cases, this constitutes a “financial contribution to the transition”.

As regards the choice of projects financed, **the quality of the carbon offset projects is a key issue** to ensure the integrity of the approach and guarantee that the projects lead to a decrease in emissions in absolute terms at the global level. Several criteria should be considered:

¹⁰ See ADEME, Fiche technique, Emissions évitées (2020) for recommendations on how to draw up a baseline scenario, which remains in any case a fictitious scenario. The example of thermal renovation makes it possible to illustrate the questions linked to the choice of baseline: comparison with the average energy consumption of the surrounding or national housing stock, the situation before renovation, the value required by the French decree applicable to tertiary buildings etc.

- **Do no significant harm principle:** the project must not do significant harm to other environmental or social factors.¹¹
- **Additionality** (or impact): a project is deemed to be additional if it is made possible thanks to financing obtained or resulting from the sale of carbon credits that it generates (financial additionality) and if the results obtained could not have been achieved without the project. A project that meets a regulatory requirement cannot be deemed to be additional.
- **Measurability** and **permanence** of the sequestered/avoided emissions:
 - the sequestered/avoided emissions must be measured using a recognised method made available by the project owner. For avoided emissions, the baseline scenario used must be strong and avoid any accommodation;
 - sequestered emissions must be permanently sequestered. The quality and management of the project must make it possible to ensure this;
 - the sequestered/avoided emissions must not lead to carbon leakage, i.e. an incentive to relocate production to benefit from more advantageous conditions in terms of the carbon footprint;
 - if companies use carbon credits, ex-post credits should be favoured over ex-ante credits, i.e. they must give priority to reduced/sequestered emissions that have actually occurred rather than a commitment to future reduction/sequestration, or at the very least, ensure that the mechanisms are in place to make sure that the sequestration or avoidance project is actually implemented, and limit the time between acquisition of the carbon credit and finalisation of the project.¹²
- **Regular verification:** an independent third party must regularly check the sequestered/avoided emissions.
- **Uniqueness of the carbon credits generated:** make sure that the same credit is not sold several times. The project owner must guarantee the uniqueness of the credits generated. This is achieved by keeping a register.

Use of strong external certification standards (in particular the Gold Standard, VCS, or in France the Label Bas Carbone) makes it possible to ensure that some or all of these criteria are met, and should be favoured if financing additional projects outside its value chain are part of the company's carbon neutrality approach. Some labels also guarantee the achievement of social or environmental co-benefits. Consequently, information must be provided regarding the process for selecting and guaranteeing the quality of the products, the type of projects used (natural or technological, sequestrations or avoidance), the duration of storage in the event of sequestration credits and the methods used to calculate the avoided emissions.

Furthermore, since the objective of global carbon neutrality involves drastically reducing greenhouse gas emissions to achieve a level close to zero, certain standards (SBTi and Oxford Principles in particular) consider that **the financing of sequestration projects** must be given priority, as only sequestration (cf. #6 above) enables a real reduction in the amount of CO₂ present in the atmosphere.¹³

¹¹ For example, the IPBES and the IPCC held a joint workshop on biodiversity and climate change. This states in particular that: "Overzealous tree planting and increases in bioenergy usage may prove harmful to natural ecosystems, according to a report by the IPCC and the IPBES. The report warned that planting single species crops to use in bioenergy is "detrimental to ecosystems when deployed at very large scales", and that **offsetting programmes had to be careful to plant the right species of tree in the right place so as to avoid damaging local ecosystems.**"

¹² See Oxford (2020): "Forward-selling and any time gap between the purchase of the offset and the successful execution of the emission reducing or carbon removing must be minimized, and mechanisms to ensure that the environmental benefits from an offset are actually delivered must be strong".

¹³ See Oxford (2020): "Most offsets available today are emission reductions, which are necessary but not sufficient to achieve net zero in the long run. Carbon removals scrub carbon directly from the atmosphere. Users of offsets should increase the portion of their offsets that come from carbon removals, rather than from emission reductions, ultimately reaching 100% carbon removals by mid-century to ensure compatibility with the Paris Agreement goals." See also World Bank (2021), Chapter 3.

While voluntary financing of sequestration projects outside the value chain via carbon credits constitutes part of a carbon neutrality strategy, it must be distinguished from systems for regulatory allocations, such as the EU Emissions Trading System (EU ETS). These regulated allocations aim to control the emissions of companies working in the most emissive sectors and enable the public authorities to comply with their decarbonisation pathway by managing the amounts allocated. Compliance with these obligations cannot replace the company's decarbonisation strategy and is not dealt with here. Nevertheless, via the allocation system it encourages a reduction in the emissions of companies subject to the rules.

8. DEVELOPMENT OF THE VOLUNTARY CARBON MARKET COULD FACILITATE ACCESS BY COMPANIES TO HIGH QUALITY OFFSET PROJECTS, ACCORDING TO THE ELIGIBILITY AND INTEGRITY CRITERIA APPLIED

The voluntary carbon market, which allows the voluntary trade of carbon credits, is currently still marginal (about 200 Mt CO₂ per year) and concentrated on forestation, renewable energy or energy efficiency projects in developing or emerging countries, but it could expand and diversify rapidly, in particular to meet demand by an increasing number of companies deploying a carbon neutrality strategy.¹⁴ Recent initiatives¹⁵ to develop the market and deal with current issues relating to integrity, transparency, liquidity and fungibility, could facilitate this expansion, and possibly facilitate access by companies to high quality projects. According to estimates, the market, which is currently valued at around \$800 million, could reach \$50 billion by 2030.

Acquisition of carbon credits via the voluntary carbon market will nevertheless be limited by the offer available and **must not replace efforts to reduce emissions, which have priority**.¹⁶ It must be seen as a **way of raising the level of ambition** of companies, rather than a way of reducing costs and aiming for an arithmetical target of carbon "neutrality" on their scale.¹⁷

¹⁴ According to data published by the World Bank, about half of companies who made commitments to carbon neutrality say they intend to entirely or partly use carbon offsetting to achieve their targets, and only a small number of companies excluded this option.

¹⁵ Taskforce on Scaling up Voluntary Carbon Markets, and more recently, the Voluntary Carbon Markets Integrity Initiative.

¹⁶ See IEA (2021, p. 31): "there is likely to be a limited supply of emissions credits consistent with net-zero emissions globally and the use of such credits could divert investment from options that enable direct emissions reductions."

¹⁷ See ADEME (2021) and World Bank (2021).

Sources

ADEME, *Avis – Neutralité carbone*, May 2021.

ADEME, *Fiche technique, Émissions évitées*, January 2020.

Carbone 4, *Net Zero Initiative*, 2020 and July 2021.

Energy & Climate Intelligence Unit/Oxford Net Zero, *Taking Stock: A global assessment of net zero targets*, March 2021.

European Commission, *Proposal for a Corporate Sustainability Reporting Directive (CSRD)*, April 2021.

International Energy Agency (IEA), *NetZero by 2050*, May 2021.

Intergovernmental Panel on Climate Change (IPCC), *Sixth Assessment Report (AR6), Climate Change 2021: The Physical Science Basis*, August 2021.

Science-Based Targets initiative (SBTi), *Foundations for Science-Based Net-Zero Target Setting in the Corporate Sector*, Sept. 2020. *SBTi Net-Zero Corporate Manual and Criteria for Pre-Launch Public Consultation*, Sept. 2021

Taskforce of Scaling Voluntary Carbon Markets (TSVCM), *Phase I report*, January 2021, *Phase II report*, July 2021.

University of Oxford, *Oxford Principles for Net Zero Aligned Carbon Offsetting*, September 2020.

World Bank, *State and Trends of Carbon Pricing 2021*, June 2021.

ANNEX: GLOSSARY

Terminology	Source	Definition
CO₂ (carbon dioxide)	IPCC (AR6)	A naturally occurring gas, CO ₂ is also a by-product of burning fossil fuels (such as oil, gas and coal), of burning <i>biomass</i> , of <i>land use</i> changes (LUC) and of industrial processes (e.g., cement production). It is the principal <i>anthropogenic</i> greenhouse gas (GHG) that affects the Earth's radiative balance. It is the reference gas against which other GHGs are measured and therefore has a Global Warming Potential (GWP) of 1.
(Total and remaining) Carbon budget	IPCC (AR6)	Maximum amount of cumulative net global anthropogenic CO ₂ emissions that would result in limiting global warming to a given level with a given probability, taking into account the effect of other anthropogenic climate forcers. This is referred to as the Total Carbon Budget when expressed starting from the pre-industrial period, and as the Remaining Carbon Budget when expressed from a recent specified date.
Anthropogenic emissions	IPCC (AR6)	Emissions of greenhouse gases (GHGs), precursors of GHGs and aerosols caused by human activities. These activities include the burning of fossil fuels, deforestation, land use and land use changes (LULUC), livestock production, fertilisation, waste management, and industrial processes. Non-CO ₂ emissions are all anthropogenic emissions other than CO ₂ that result in radiative forcing. These include short-lived climate forcers, such as methane (CH ₄), some fluorinated gases, ozone (O ₃) precursors, aerosols or aerosol precursors, such as black carbon and sulphur dioxide, respectively, as well as long-lived greenhouse gases, such as nitrous oxide (N ₂ O) or other fluorinated gases.
Anthropogenic removals	IPCC (AR6)	The withdrawal of greenhouse gases (GHGs) from the atmosphere as a result of deliberate human activities. These include enhancing biological sinks of CO ₂ and using chemical engineering to achieve long term removal and storage [...]
Carbon dioxide removal (CDR)	IPCC (AR6)	Anthropogenic activities removing carbon dioxide (CO ₂) from the atmosphere and durably storing it in geological, terrestrial, or ocean reservoirs, or in products. It includes existing and potential anthropogenic enhancement of biological or geochemical CO ₂ sinks and direct air capture and storage, but excludes natural CO ₂ uptake not directly caused by human activities.
Net zero emissions	IPCC (AR6)	Condition in which metric-weighted anthropogenic greenhouse gas (GHG) emissions are balanced by metric-weighted anthropogenic GHG removals over a specified period.
Net negative emissions	IPCC (AR6)	Situation of net negative greenhouse gas emissions is achieved when metric-weighted anthropogenic greenhouse gas (GHG) removals exceed metric-weighted anthropogenic GHG emissions. This notion can be understood on a global (planet) scale as well as on a smaller scale.

Carbon dioxide capture and storage (CCS)	IPCC (AR6)	A process in which a relatively pure stream of carbon dioxide (CO ₂) from industrial and energy-related sources is separated (captured), conditioned, compressed and transported to a storage location for long-term isolation from the atmosphere. CCS does not remove CO ₂ from the atmosphere on its own, but can contribute to reducing atmospheric CO ₂ from energy or industrial sources when combined with bioenergy production or if CO ₂ is captured directly from the air and sequestered.
CO₂ capture and utilization (and storage) (CCU)	IPCC (SR15)	A process in which CO ₂ is captured and then used to produce a new product (chemicals, energy or materials). If the CO ₂ is stored in a product for a climate-relevant time horizon, this is referred to as carbon dioxide capture, utilisation and storage (CCUS). Only then, and only combined with CO ₂ recently removed from the atmosphere, can CCUS lead to carbon dioxide removal. CCU is sometimes referred to as carbon dioxide capture and use.
Carbon neutrality	IPCC (AR6)	Condition in which anthropogenic CO ₂ emissions associated with a subject are balanced by anthropogenic CO ₂ removals. [...]
Carbon sinks	IPCC (AR6)	Any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere (UNFCCC Article 1.8, 1992).
Carbon sequestration	IPCC (SR15)	The process of storing carbon in a carbon pool.
Value chain	ONU	A business enterprise's value chain encompasses the activities that convert input into output by adding value. It includes entities with which it has a direct or indirect business relationship and which either (a) supply products or services that contribute to the enterprise's own products or services, or (b) receive products or services from the enterprise. (" <i>The Corporate Responsibility to Respect Human Right</i> ", 2012).
Science-based targets	-	The "science-based" emission reduction objectives allow organizations to justify a decarbonisation trajectory that complies with the objectives of the Paris Agreement (1.5 or 2° C) and with the most recent scientific knowledge on this subject.

This document is part of the Finance ClimatAct project and was carried out with the support of the European Union's LIFE programme.

This work only reflects the AMF Climate and Sustainable Finance Commission's point of view. The other members of the ClimAct Finance Consortium and the European Commission are not responsible for any use that may be made of the information contained herein.

About the Finance ClimAct

The Finance ClimAct project contributes to the implementation of France's National Low Carbon Strategy and the European Union's Sustainable Finance Action Plan. It aims to develop new tools, methods and knowledge enabling (1) retail investors to integrate environmental targets into their investment choices, and (2) financial institutions and their supervisors to integrate climate issues into their decision-making processes and align financial flows with energy/climate objectives.

The consortium, coordinated by ADEME, also includes the French Ministry for the Ecological Transition, the Autorité des Marchés Financiers (AMF), the Autorité de Contrôle Prudentiel et de Résolution (ACPR), 2° Investing Initiative, Institute for Climate Economics, Finance for Tomorrow and GreenFlex.

Finance ClimAct is an unprecedented programme with a total budget of €18 million and funding of €10 million from the European Commission.

Duration: 2019-2024

About the AMF

The AMF is an independent public authority responsible for ensuring that savings invested in financial products are protected, providing investors with adequate information and supervising the orderly operation of markets.



This project has received funding from the European Union's LIFE Integrated Project 2019 program

