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INFORMATIVE NOTE

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Voluntary offset markets for carbon (and other GHGs)

At a time when the fight against climate change is on the agenda of governments, institutions and economic operators, the voluntary carbon markets have been attracting more and more interest as a way to pursue this fight¹.

The general idea of these markets is that projects of various types transform their greenhouse gas (GHG) sequestration capacity into tradable credits. The projects relate to the creation, reinforcement or maintenance of forests, the implementation of renewable energy or marine prairies or other “blue carbon” projects, etc.

To achieve carbon neutrality, operators and citizens can acquire these credits and thus offset their GHG emissions. This is particularly important in sectors where reducing emissions is functionally or technologically more difficult (hard-to-abate sectors).

In line with this agenda and with the approval of the European acts on taxonomy, voluntary markets have also gained prominence in Portugal. As a result, Order 12401/2020 was issued on 21 December and through it, the Minister for the Environment and Climate Action pushed for the development of a proposal for a regulatory framework for these markets.

Therefore, it is expected that, in the near future, legislation regulating this matter will be approved, both at national and European level. Such legislation was recently announced by the European Commission regarding the proposal for a European regulation on the certification of high quality carbon removals.

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¹ Besides these markets, there are other emerging markets in environmental and climate matters, such as the “bio-credits” that were recently under discussion at the Convention on Biological Diversity held in Montreal. Bio-credits’ are instruments that securitise contributions to maintaining or safeguarding ecological balance through private funding.

1. Background and current situation of the voluntary emission offsetting markets

In 1994, the Framework Convention on Climate Change (FCCC) entered into force. The Kyoto Protocol was adopted under it in 1997 at the 3rd COP (Conference of the Parties to the FCCC). This protocol established obligations to reduce GHG emissions and, reflectively, introduced a ban on the increase of those same gases. In line with this, the Paris Agreement (2015) was concluded at COP21.

To comply with the Kyoto commitments, the European Union (EU) adopted the European Emissions Trading Scheme (ETS) model – cap and trade – which began operating in 2005 and is still in force today. Meanwhile, in other parts of the world, similar systems were adopted and have given rise to the current international system of transfers of emission allowances, known as “Kyoto units”, which instruments, in general, recognised in the Single Market.

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It is necessary to draw a distinction between emission reduction systems – such as the EU-ETS – which deals with emission allowances, and compensation or emission reduction systems (carbon removals or carbon offsets), which include the voluntary “carbon credit” markets. The difference between both is such that it is not viable to use “carbon credits” as if they were emission allowances, because the purpose of each one is quite different. For example, today it is not possible to reduce emissions subject to EU-ETS monitoring (and not have the corresponding emission allowances) by claiming that the equivalent in “carbon credits” was bought in a voluntary market.

The first great compensation system was established in the Kyoto Protocol. It allowed a signatory state to compensate deviations from the targets it was bound to by means of another state that had more developed GHG sequestration schemes or, simply, had more natural sinks, such as forests and, therefore, an excess of sequestration in relation to the targets it had made a commitment to meeting. Nevertheless, this compensation system had a subsidiary nature because the reduction effort actually had to occur.

This type of voluntary compensation system is currently embodied in the GHG reduction or voluntary compensation markets. In these markets, “carbon credits”, which are sometimes called verified emission reductions or verified carbon units, are issued. However, there are other forms of offsetting.

Indeed, there are essentially three offset models available to businesses:

- i) Direct offset model: the GHG issuing operator is responsible for implementing sequestration mechanisms for its own emissions. For example, it manages its forests in such a way as to achieve net-zero emissions from its activity.
- ii) Indirect offset model (bilateral): an issuing operator acquires sequestration capacity directly from third parties under bilateral instruments. The third parties are either issuing operators that use the direct offset model and have a surplus and/or nonissuing operators that exclusively undertake sequestration projects.
- iii) Voluntary market offset model: where “carbon credits” are acquired. The way this works will be described in more detail below.

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2. Voluntary markets v mandatory markets

Before characterising these two market types, it should be noted that the distinction between voluntary and regulated markets is not precise, because voluntary markets will not be exempt from any kind of regulation. On the contrary, the tendency is for the voluntary carbon credit markets to be increasingly regulated, through the imposition of common rules and standards to validate and verify emission reduction projects.

The contrast should rather be made between voluntary markets and mandatory / compulsory / compliance markets.

In the GHG field, the only mandatory market in the EU is the EU-ETS, but there may be many voluntary markets of various types. It is important to understand the levels at which these types of markets can be distinguished and connected. The main ones are:

- i) In terms of function: the EU-ETS is a cap and trade market that incentivises GHG emission reductions by imposing a price paid for emissions, but from each operator standpoint it does not guarantee that the reduction happens. The voluntary carbon credit markets certify that a certain emission reduction has occurred, and the credit proving this can be used by whoever purchases it to demonstrate the offsetting of their emissions.
- ii) In terms of the object: the EU-ETS does not currently truly cover all GHGs. For example, despite being expressly listed as GHGs in the applicable instruments, methane, HFCs and SF6 do not correspond to any type of installation currently covered by the EU-ETS. Therefore, they can only be dealt with under voluntary markets if the market in question so wishes. Thus, “voluntary carbon markets”, “voluntary methane markets”, “voluntary GHG markets”, etc. may emerge.

3. The voluntary markets in action

In a voluntary market, there are two essential sets of parties involved in buying and selling GHG credits. It is the sum of the wills of these main parties – different but convergent – that, when they meet, allow the market to be born and kept alive:

- i) Promoters of activities and projects with GHG sequestration capacity higher than their emissions and who wish to transform this “sequestration surplus” into credits and make them available for sale – thus creating a new source of revenue for their activity (supply agents).
- ii) Issuing operators who are unable to fully eliminate GHG emissions from their activities and intend to offset them with the sequestration capacity of these projects (demand agents).

However, other entities must come into play to enable the voluntary market to operate.

From the outset, the intervention of verifiers is essential, as they are the ones who make the markets reliable. Ideally external and independent in relation to supply and demand, their main role is to verify how “green” the projects are and conclude whether, ultimately, the conditions are met for the corresponding credits to receive validation.

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To this end, these bodies verify, including on site, that the standards defined by the market for assessing the GHG sequestration capacity of each project are effectively met (ex-ante validation). Thus, the verifiers guarantee the eligibility of projects in light of the rules of the market itself to, ensuring that demand and supply effectively match.

Once the projects are validated, two models for the issuance of credits may be considered:

- i) Issuance by the verifier, in the name and on behalf of supply agents.
- ii) Issuance by the offer agents, after approval by the verifier.

Verifiers not only act under the terms described (prior verification). They also have the important task of ensuring the continuity of the circumstances underlying the credit (successive or ex-post verification).

Finally, at the top of the list of responsibilities is the market manager, who is responsible for organising the matching of supply and demand, defining the eligibility standards for participants and projects, and establishing the market's operating rules and ensuring compliance with them. As part of this, although it is not absolutely necessary, it also falls to the market manager to organise the registration platform for the carbon credits issued, transferred and cancelled.

Finally, the voluntary markets also include the presence of other players whose participation is justified by the nature of carbon credits. As these credits are a tradable asset, their (re)circulation is an activity in itself, and may therefore give rise to a secondary market that is formed in parallel with and dependent on the primary market.

4. Offsetting guarantees and quality of voluntary markets

As a result of the principles established in the Kyoto Protocol and the Paris Agreement, a consensus has formed around a basic set of quality guarantees that should underlie the creation and transaction of credits. This is to ensure the credibility of the system and to prevent greenwashing.

There are fundamentally seven guarantees that the voluntary markets should provide:

- i) **Additionality:** the projects underlying the credits must be additional, that is, their implementation cannot be on a business-as-usual plan. Therefore, additionality is only verified if the implementation of the project is voluntary, if it does not originate from the fulfilment of a legal obligation, or if it does not derive from other analogous factors such as technological development.

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- ii) **No double counting:** a given sequestered and securitised quantity can only be the subject of one (and only one) offsetting credit. Otherwise, the offsetting effect is dissipated to the point where such credit loses its unit representative value (“one tonne is one tonne” principle).
- iii) **Permanence:** requires the project to ensure sequestration in a sustainable way and prevent the carbon sequestered through the project from being released into the atmosphere or the sequestration effect from simply disappearing (e.g., by project decommissioning). It is good practice to set a validity period for the credit taking into account the type of project.
- iv) **Quantification:** the volume of emissions that a project allows to be sequestered must be measurable and capable of quantification, or it may become ineligible for the purposes of the voluntary market.
- v) **Sustainability:** the project that originates the credits must be analysed from a holistic perspective. In other words, all effects that may result from it must be considered, including possible negative effects, for example, social or environmental effects. From this perspective, it is also important to ensure that the project complies with the legal requirements applicable in the jurisdiction in which it is implemented.
- vi) **Transparency:** in the absence of centralisation in one entity overseeing the operation of all voluntary markets together, and to better ensure that no double counting occurs, it is good practice for the credits already traded and the underlying project to be made public. To this end, the market manager may even establish protocols with other voluntary markets.
- vii) **Independence:** while transparency operates mainly at the inter-market level, independence is an intra-market guarantee, in that the market only operates in credible terms if the verifiers are effectively independent from supply and demand agents. To ensure that this occurs, the market manager may also perform a verifying role as long as it is effectively independent vis-à-vis the market agents (supply and demand). Conversely, the market manager cannot perform both roles and must use external verifiers if any situation is discernible that may compromise not only the actual independence, but also the appearance of it.

5. Opportunities to create value

In addition to being an instrument to promote projects that offset emissions, especially emissions that are difficult to reduce (in the hard-to-abate sectors), the voluntary carbon credit markets open up various opportunities to create value. These opportunities will progressively increase as the following conditions are consolidated:

- i) There is increasing demand from stakeholders and the wider community around the fight against climate change.

- ii) Regulation is being created, as proposed at the European level, which ensures common standards and methodologies for accounting, validation and verification of carbon removal projects and the credibility and seriousness of the emissions reduction validation and verification activity.

Besides others that the dynamism of the market is bound to create, some of the opportunities for value creation from the carbon credit markets are:

- i) Promoters of forestry or other projects that capture carbon from the air or retain it in the soil (including carbon farming) or in products may have an additional source of revenue.
- ii) Project operators who wish to purchase carbon credits gain a way to undertake credible emission reduction or offset programmes via this route.
- iii) Regulated and credible certification standards and methodologies make it possible to open the door to the financing of carbon emission reduction projects, whether by private or public funding.

Finally, it is a fact that voluntary markets do not only serve companies and states. In fact, in the context of climate citizenship that includes the right to climate balance and the power to demand it, it is increasingly clear that ordinary citizens can also use these markets to offer their contribution to a healthy environment and climate.

6. Next steps

Today some large corporate issuers already purchase and trade voluntary carbon credits certified by Gold Standard, Verra or other registries. Carbon offset and removal projects outside Europe are predominant.

However, it is expected that the market will grow exponentially in the future. This will happen as greater regulation of these markets and the creation of common standards and methodologies dispel the perception, which still exists, of a lack of transparency in this market.

The European Commission has already advanced a proposal for regulation of the voluntary carbon markets, and Portugal has also put this issue on the agenda. This step will be decisive in boosting these markets in Europe. ■

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