



**NATIONAL COUNCIL FOR THE ENVIRONMENT AND
SUSTAINABLE DEVELOPMENT**

**OPINION ON THE DRAFT DECREE-LAW ESTABLISHING A
VOLUNTARY CARBON MARKET IN PORTUGAL**

11th of April 2023

PREAMBLE

In the scope of the public consultation of the draft Decree-Law (DL) to create a voluntary carbon market at a national level by establishing the rules for its functioning, the National Council for Environment and Sustainable Development (CNADS) decided to reactivate the Working Group (WG) that had previously given its opinion on the Climate Framework Law.

This WG, coordinated by Councillor Júlia Seixas and made up of the following Council members: Jaime Braga, Emanuel Gonçalves, Paulo Magalhães, João Joanaz de Melo, Jorge Moedas, Gonçalo Santos Andrade, Laura Tarrafa and Luísa Schmidt, was mandated to promote reflection on the aforementioned draft legislation and prepare a draft opinion, to be submitted later to the plenary session.

This Opinion was approved by electronic consultation, with a majority of 25 votes in favour, which took place between 5 and 10 April 2023.

CONSIDERATION OF MAIN ASPECTS

1. The carbon neutrality of the Portuguese economy, as assumed in the Basic Law on Climate, Law no. 98/2021, of 31 December, requires a significant effort in the reduction of greenhouse gas emissions (GHG) in all economic activities and in the CO₂ removal from the atmosphere through its sequestration, preferably by natural ecosystems, with emphasis on national forests.
2. The carbon credit markets, commonly referred to as the voluntary carbon markets, have been growing, driven by strong demand, especially from companies as part of their climate mitigation and communication strategies. Carbon credits are generated on a project-specific basis and represent an additional reduction of GHG emissions or an additional removal of CO₂, compared to what is legally established in the country where the project is implemented. As the market grows, so also does the scrutiny of the role of carbon credits to meet the emissions targets of these organisations, demanding greater rigour and transparency in the process of credit generation and monitoring to ensure market integrity and associated environmental credibility. Several evaluations¹ have drawn attention to the lack of environmental integrity and effectiveness of their role in combating climate change.
3. CNADS welcomes the Portuguese government's initiative in developing a draft decree law creating the regulatory conditions for the creation of a voluntary carbon credits market in Portugal. If well designed and with a clear scope, this market may constitute an additional and complementary incentive to the existing instruments (PNEC2030, RNC2050²) for the pursuit of climate mitigation, aiming at carbon neutrality, based on projects to be developed in national territory and promoted by private investment.
4. As basic principles, CNADS safeguards that:

¹ [Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless](#), The Guardian, 18.01.2023

² PNEC2030 - National Energy and Climate Plans 2030
RNC2050 - Roadmap for Carbon Neutrality 2050

- a. The voluntary carbon credit market, by providing the possibility of offsetting emissions, must not function, under any circumstances, as an instrument to support avoidable (i.e. effective and economically feasible) GHG emission reductions in the different emitting organizations and activities.
- b. the voluntary carbon credit market must not be, under any circumstances, an instrument that encourages the diversion of public funds from current or planned actions to promote carbon sequestration, namely as regards payment for ecosystem services.

On the Origin of Carbon Credits

5. The CNADS points out, in a very positive way, the emphasis given, right in the preamble, to the role of natural-based solutions insofar as they provide "simultaneously important benefits for the protection of biodiversity and natural capital, for the regulation of different natural cycles, for landscape design and for intervention in territories, especially the most vulnerable ones, also contributing to adaptation to climate change by increasing territorial resilience".
6. The prospective analyses carried out within the scope of the PNEC and the RNC allow us to ascertain the feasibility of a very significant reduction which, together with the role of CO₂ sequestration from the atmosphere by natural systems, namely forests, will ensure a path towards carbon neutrality for the Portuguese economy. Although the GHG emission reduction options have varied cost-effectiveness indicators, depending on the type of technology, the current market conditions provide, directly (i.e. paybacks of a few years) or indirectly (e.g. access to specific funds, as is the case of specific Recovery and Resilience Plan projects), adequate solutions for the implementation of the overwhelming majority of emission reduction options in the various sectors of the economy. Added to this is the fact that some instruments in force, such as the European Emissions Trading Scheme, by establishing a value for the emission right of 1 t CO₂, works as a direct incentive for the competitiveness of emission reduction options by the emitting companies.
7. The options for removing CO₂ from the atmosphere through sequestration projects, namely from natural systems, as is the case of new and existing forests, do not benefit from any instrument in force that attributes a value to the CO₂ sequestration function, and which functions as an incentive to the development of these ecosystems, without which it will be impossible for Portugal to achieve carbon neutrality.
8. CNADS draws attention to the options for removing CO₂ from the atmosphere through sequestration projects by marine systems. We know that Portugal's largest carbon sink is probably deep ocean sediments. The current central problem is the non-existence of instruments to measure the carbon cycle, circulation times, fixing speed, which prevents its quantification for the time being. However, it would be strategic for Portugal, given the size of this component (97% of its territory), to invest in the development of these quantification instruments and certification systems that would allow the inclusion of these components in the market. These mechanisms would boost investment in the recovery of marine systems and their protection, given the enormous

- potential value they represent for the European and global market. Currently, their state of degradation does not allow them to perform the service of natural CO₂ capture effectively. It is notable that in some cases the biomass in these systems is down to 10% of its historic value - for example in populations of the ocean's top predators - from whales and dolphins to tuna, swordfish and sharks. However, restoring the biomass of marine species through marine protected areas and other appropriate management measures, as well as restoring degraded marine systems (sea grasslands, seaweed forests, marshes and estuaries) would also restore the important functions of carbon capture, recycling and sequestration associated with them.
9. Options for the removal of CO₂ from emissions, generated by the burning of fossil fuels or by industrial processes, through technological capture projects are options which are still at an experimental and developmental stage and have therefore been supported by R&D projects. These technologies, in case they play an important role for carbon neutrality, should be subject to special regulation, with their proper framework.
 10. Thus, the scope of projects that generate carbon credits, admitted in the present proposal, makes coexist emission reduction projects and CO₂ removal projects of natural and technological basis. These typologies have a very different economic rationale, either by their level of maturity and cost-effectiveness or by the very different nature of the credit generating process. This coexistence, which may make sense in the global market, generates a lack of equity in the access to the instrument when applied to a national territory, namely due to the transaction cost it implies and which is not compatible with the remuneration of the same commodity (the credit) at a common price.
 11. The language used, for example in the preamble, is not clear on what is expected from the additional role of carbon credits generated and valued under this DL, vis-à-vis what is established by regulation, namely what is contemplated in instruments such as PNEC2030 and RNC2050. The final text should not attribute a role to carbon credits that contribute to reduction objectives and targets already assumed as feasible (i.e. technologically and economically) by those instruments, which is not the purpose of the voluntary carbon market, thus conditioning the scope of mitigation or carbon capture projects.
 12. Still in the preamble, the intention to promote innovative mitigation solutions and technologies, in order to support the fulfilment of national goals regarding climate action, requires clarification on what should be understood by innovative technologies in emission reduction projects; how is considered and what is the degree of innovation of the technologies considered for the purposes of credit generation? Specifically, what TRL (Technology readiness levels) should be considered? Without any specification of what the DL understands as innovative, an uncertainty is generated in the promoters which usually brings costs to the system. Furthermore, innovative technologies do not necessarily or at all generate fewer impacts. Innovation should be promoted through specific mechanisms and regulatory flexibility, and not through benefits attributed to a technology labelled as "innovative".
 13. It is strongly desirable the clarification of the scope of projects that generate carbon credits, in the national territory, which safeguards the equity of the typology of projects

- in the access to the voluntary market, which will bring benefits to the expectation of the promoters of these projects, avoid costs incurred in the system and facilitate the convergence of the market in a price for the carbon credit.
14. Regarding the projects of CO₂ removal from the atmosphere by sequestration of natural base, nothing is mentioned throughout the articles about the typology of forest species. Only in Art. 8 is mentioned made of "(...) conservation of natural capital and for the construction of a more adapted and resilient landscape (...)" in the context of the areas defined as priorities. Given the significant role of forest ecosystems in climate resilience and neutrality, we recommend that priority be given to carbon sequestration projects that favour the regeneration of native ecosystems. The few existing studies indicate that the forest of autochthonous species is the type of soil occupation that provides a more longest-term carbon storage³, and is also the one that best meets the objective of promoting other ecosystem services (biodiversity, regulation of the water cycle, among others). But there are other possibilities, such as occupations that promote the accumulation of organic matter in the soil. Mere "reforestation" is of little use if it does not simultaneously offer guarantees for the maintenance of the regenerated forest or its product in the long term, which implies a permanent protection status. It should be pointed out that any forest occupation, whether stationary or cyclical (e.g. subject to regular felling or frequent fires) functions as a reservoir (of variable importance depending on the amount of average biomass in the system and the destination of the woody material removed, whether it has short or long term uses), but does NOT function as a carbon sink. This aspect has direct implications on the permanence of carbon credits with impact on the stabilization of the climate system.
 15. In this same sense, even if it necessarily implies an innovative path in relation to that normally established, the possibility of including already existing forests in the scope of the voluntary carbon credit market should be considered, for example by considering the baseline situation up to 30 years ago and the present or future protection status. Although mature forests do not currently remove CO₂ from the atmosphere, payment for this service would act as an incentive for their conservation and as a guarantee that the stored carbon will be maintained, thus avoiding, absurdly and even perversely, compensating for having an existing forest burn down in order to enjoy its growth, as the present Decree-Law proposes.
 16. The formulation of the proposed Decree-Law does not seem to recognise the already long path of carbon credit generation and recognition, namely in terms of methodologies. In truth, for a large group of projects there are methodologies which are already recognised, including by the United Nations and other international organisations, so it would be easier and with lower transaction costs for promoters if (i) APA I.P (Portuguese Environment Agency). published the baseline situation which should be considered by project typology; and (ii) had selected from the outset a set of methodologies which could be adopted, naturally leaving promoters the possibility of

³ Melo, J.J., Galvão, A. (2019). Assessment of storage capacity and carbon capture in pilot areas. Report carried out at FCT NOVA for the Environmental Fund within the project "Economic instruments for biodiversity conservation and remuneration of ecosystem services in Portugal" (PES), July 2019. 18 p.

submitting new methodologies whenever justified. The procedures foreseen in Article 19 anticipates an avoidable complexity with high transaction costs.

17. It should be noted, with regard to the consideration of the baseline situation for the purposes of CO₂ removal projects through natural-based sequestration (e.g. forests), that the promoters will have to elaborate (in the current formulation of the Decree Law), the current limitations on the evaluation of existences and potentialities, including pre-existing storage. Information in some detail on living biomass (above and below ground) and soil organic matter is needed and should be included, with a sufficient sampling frame and detail, in the various editions of the National Forest Inventory (NFI), which, among other functions, should inform the National Inventory Report under the Climate Convention. Unfortunately, the latest editions of the NFI are highly insufficient: they contain relevant data on land cover (although lacking harmonisation with the Land Use Map), but not on densities or reliable data on biomass. This situation is even more serious when Portugal has an enormous ecological diversity, with natural ecosystems representing practically all of Europe in a relatively small territory - given that we are in the transition zone of the three major European climatic types (Mediterranean, Atlantic and Continental) crossed with a great geological, physiographic and human occupation variety. We therefore need a density of information on the NFI, as well as on biodiversity, soil and water quality, which currently does not exist. These limitations justify the need for an 'official' baseline situation promoted by public administration bodies, to avoid distortions generated in the methodologies that each promoter will develop.
18. It is advisable a clarification of language throughout the text, and harmonization with other instruments in the field of climate policy. In this sense, the term CO₂ removal or carbon removal should be used instead of just referring to carbon sequestration, since what generates the credit is the effective and verifiable removal of CO₂ from the atmosphere, achieved by sequestration projects. For example, the national inventory instrument refers to "National Inventory of Emissions by Sources and Removal by Sinks of Air Pollutants".
19. On the additionality principle, and focusing only on the case of carbon sequestration projects regarding future emissions, it would be more prudent to refer to the existing regulatory framework (e.g. to safeguard projects already subject to some type of funding, avoiding double valuation of the same function), although this is done in the definition (Article 4). Thus, we propose the following wording: "Additionality, ensuring that the expected CO₂ removal occurs only with the implementation of the proposed project, considering the legal framework in force."
20. The permanence principle is critical to the environmental integrity of the carbon market, since the payment of a carbon credit presupposes that the corresponding amount (1 t CO₂) does not enter the atmosphere again. This principle is the most difficult to guarantee, given the difficulty of associating the human scale (which ensures the verification of the project) to the time of permanence of CO₂ in the atmosphere, 100 years on average. To ensure the integrity of the instrument, there should be explicit mention of a minimum crediting period for any project. It should be noted that a minimum period of 30 years is very short, being, for example, the rotation period of a production pine forest; in contrast, an autochthonous forest takes several decades to

grow. In the case of natural-based CO₂ removal projects, the permanence of the credit is directly related to its carbon sink capacity (t C/ha), which provides information on the long term - different from CO₂ capture (t C/ha/year) which provides information on the carbon cycle in the short term. The permanence principle and the reservoir capacity of natural-based ecosystems necessarily imply the inclusion of already existing ecosystems in this proposal for a voluntary credit market.

21. For language clarification, it is suggested to avoid the term 'GHG emissions sequestration' since it commonly refers to mitigation or reduction of GHG emissions and CO₂ or carbon sequestration. This term appears in the definition of the principle of effectiveness. Sequestration should be connected with an effective reduction of total CO₂ in the atmosphere, and mitigation or reduction should be connected with neutralisation or reduction of emissions.
22. On the principle of transparency, the reference to "avoiding the existence of double counting of carbon sequestration" is not understood. This objective must be ensured in the monitoring and reporting referred to in the monitoring principle which, by the way, must make it explicit. An important aspect to ensure transparency is the information on the average price charged. We suggest the following formulation:
 - a. "Follow-up, ensuring the existence of a robust monitoring, reporting and verification process to account for the carbon removals that result from the project activity, ensuring that there is no double counting of credits."
 - b. "Transparency, ensuring public access to information regarding the activities carried out by the various participants in the voluntary carbon market, namely regarding the average price practiced and the quantity of carbon removals ensured, among others."

On offsetting emissions (Article 5)

23. The CNADS recognises the value of offsetting emissions for the purpose of applying the credits generated in the voluntary market, as explicitly stated in Article 5, point 1. However, for the mechanism's credibility, we suggest that the "clear decarbonisation strategy" referred to must be public, that is, available for consultation by anyone, and must include concrete goals and objectives for reduction of GHG emissions of the organisation, by specific dates. Access to the voluntary carbon market by organisations with mostly qualitative strategies, guided by aspirational goals and targets and without any realisation should be prevented.
24. In Art. 5.3, it is not clear who and/or how the residual character of the emissions is evaluated.
25. The "transparent and verifiable mechanism of accounting and compensation of emissions that allows the evaluation of the progress achieved in the fulfilment of those commitments" referred to in Art. 5, point 5, should be objectified, for example, through the publication of long-term commitments for the maintenance of the occupation of the territory, and annual monitoring reports.

On the Reversal of emissions in carbon sequestration projects (Art. 12)

26. All carbon sequestration projects configure situations or conditions of risk of reversion, whatever their characteristics or geographical areas where they will be implemented. Thus, it is advisable to make point 1 clearer, for example: "Carbon sequestration project promoters should identify and qualify the risks of reversal of CO₂ removals and ensure that these risks are minimised, thus avoiding situations of reversal of verified removals".

About the Guarantee Fund (Article 13)

27. The 'Guarantee Stock Exchange' is a correct measure to manage the risk of reversion of carbon credits, issued in the form of credits, however verified and transacted, during the life of the project. The amount of 20% of the CCV issued by carbon sequestration projects for this stock exchange and 10% in the case of projects developed in IPAs (Integrated Landscape Management Areas) seems frankly low to us. Given the geographical nature of the country in terms of various risks that compromise the permanence of credits, and considering the importance of forestry projects for the country's climate neutrality and resilience, we deem the following necessary:

- a. Establish as an eligibility criterion for carbon sequestration projects areas that have it as an objective and means of management for the regeneration of autochthonous ecosystems;
- b. Require forest management plans for credit-generating sequestration projects;
- c. Increase the amount of CCV to a higher value, considering historical values of greater frequency of loss of forest areas, over a 30-year period (if this information does not exist, it should be ascertained, otherwise 20% would mean nothing in the national/regional context of the project).

About the price of carbon credits

28. One of the potentially problematic aspects of the proposed legislation for the voluntary carbon credit market is related to credit pricing, because it can be a discouraging factor for the supply, that is, for the development of the credit generating project. Before the publication of the Decree Law, it is strongly recommended that APA ascertain the price range that allows for the viability of a market of this nature in national territory, under penalty of incurring expectations and transaction costs without the respective return. It does not seem appropriate to consider, as a reference, the international market price, since the conditions for the development of projects in national territory are different from those that feed the international market, even those of similar typology (e.g. reforestation). Furthermore, the demand for carbon credits will have other motivations to prefer credits generated in national territory, anticipating a willingness to pay a higher price than that practiced in the international market.

29. It is natural and frequent that in the first years (3-5 years) of a new market, understood as "learning phase", prices are volatile, too high or too low, running the risk of the market not being interesting for demand or supply, respectively, and therefore compromise its operation. Thus, it is recommended to safeguard conditions that ensure the existence of a minimum price, which encourages or motivates national projects that generate credits. This could take the form of options such as:
- a. Establishment of a regulatory minimum price (in line with that determined in paragraph 28) during the learning phase, with monitoring every 6 months, for eventual 'withdrawal' from this mechanism.
 - b. Inclusion of information on the average transaction price in the Platform for Registration of Projects and Carbon Credits (Art. 17), along with information such as credits generated and issued, market agents, transactions and the status of credits (as defined in its point 1).

RECOMMENDATION

30. Given the numerous doubts that the current wording of the Decree-Law raises, particularly on the scope of projects that generate emission credits, CNADS strongly recommends that APA conduct a profound review of the aspects raised here. Under the current terms, CNADS considers that there are no conditions to carry forward the voluntary carbon market.
31. CNADS makes itself available to collaborate with APA, under the terms that may be understood, with a view to reformulating the present DL proposal, because it considers that, if well designed, the voluntary carbon market constitutes an important additional and complementary incentive to the existing instruments for the pursuit of climate neutrality, based on national projects promoted by private investment.

[Approved on 11 April 2023, by majority with 25 votes in favour, expressed via email]

The President

a) Filipe Duarte Santos