

Protected Agriculture: Mexico

The Climate Bonds Standard & Certification Scheme's Protected Agriculture Criteria for Mexico

Criteria document

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I. Definitions

Climate Bonds Initiative (CBI): An investor-focused not-for-profit organisation, promoting large-scale investments that will deliver a global low carbon and climate resilient economy. The Initiative seeks to develop mechanisms to better align the interests of investors, industry and government so as to catalyse investments at a speed and scale sufficient to avoid dangerous climate change.

Climate Bond: A climate bond is a bond used to finance – or re-finance - projects needed to address climate change. They range from wind farms and solar and hydropower plants, to rail transport and building sea walls in cities threatened by rising sea levels. Only a small portion of these bonds have been labelled as green or climate bonds by their issuers.

Certified Climate Bond: A Climate Bond that is certified by the Climate Bonds Standard Board as meeting the requirements of the Climate Bonds Standard, as attested through independent verification.

Climate Bonds Standard (CBS): A screening tool for investors and governments that allows them to identify green bonds where they can be confident that the funds are being used to deliver climate change solutions. This may be through climate mitigation impact and/ or climate adaptation or resilience. The CBS is made up of two parts: the parent standard (Climate Bonds Standard v2.0) and a suite of sector specific eligibility requirements. The parent standard covers the certification process and pre- and post-issuance requirements for all certified bonds, regardless of the nature of the capital projects. The Sector Criteria detail specific requirements for assets identified as falling under that specific sector. The latest version of the CBS is published on the Climate Bonds Initiative website

Climate Bonds Standard Board (CBSB): A board of independent members that collectively represents \$34 trillion of assets under management. The CBSB is responsible for approving i) Revisions to the Climate Bond Standard, including the adoption of additional sector Criteria, ii) Approved verifiers, and iii) Applications for Certification of a bond under the Climate Bonds Standard. The CBSB is constituted, appointed and supported in line with the governance arrangements and processes as published on the Climate Bonds Initiative website.

Climate Bond Certification: allows the issuer to use the Climate Bond Certification Mark in relation to that bond. Climate Bond Certification is provided once the independent Climate Bonds Standard Board is satisfied the bond conforms with the Climate Bonds Standard.

Green Bond: A Green Bond is where proceeds are allocated to environmental projects. The term generally refers to bonds that have been marketed as “Green”. In theory, Green Bonds proceeds could be used for a wide variety of environmental projects, but in practice they have mostly been the same as Climate Bonds, with proceeds going to climate change projects.

Technical Working Group (TWG): A group of key experts from academia, international agencies, industry and NGOs convened by the Climate Bonds Initiative. The TWG develops Sector-Specific Criteria - detailed technical criteria for the eligibility of projects and assets as well as guidance on the tracking of eligibility status during the term of the bond. Their draft recommendations are refined through engagement with finance industry experts in convened Industry Working Groups and through public consultation. Final approval of Sector Criteria is given by the CBSB.

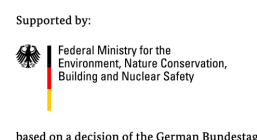
Protected Agriculture: a general term that encompasses horticultural greenhouses and refers to a variety of crop production technologies and techniques in which partial or full control of the plant micro-climate targets species' requirements, greatly improving growing conditions relative to open field agriculture. By reducing variability (e.g. in soil conditions, water availability, temperature, evaporation, pest and disease vectors, input use efficiency) and protecting crops from different environmental, biological and climatological elements, greenhouses and other forms of protected agriculture can: (i) achieve higher and more consistent productivity; (ii) meet market demand for crop quality and timing; (iii) increase control over sanitary and phytosanitary conditions; (iv) reduce crop risk and damage.

We would like to thank all the reviewers of the Protected Agriculture Criteria for their time and valuable expertise that helped shape these Criteria. A full list of the reviewers can be found in Appendix I. The Climate Bonds Initiative gratefully acknowledges the important contributions of Lawrence Pratt, Juan Manuel Ortega, and Isabelle Braly-Cartillier to these Criteria, and special thanks are given to Dr. Christine Negra (Versant Vision LLC), the lead specialist coordinating the development of the Criteria.

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2. Introduction

2.1 The Climate Bonds Standard

Investor demand for Green Bonds & Climate Bonds is strong, and will increase in line with the delivery of quality products into the market. However, investor concerns about the credibility of green labelling are also growing. Standards, assurance & certification are essential to improve confidence and transparency, which in turn will enable further strong growth in the market.

The Climate Bonds Standard and Certification Scheme is an easy-to-use screening tool that provides a clear signal to investors and intermediaries on the climate integrity of Certified Climate Bonds.

The Climate Bonds Standard & Certification Scheme is an easy-to-use tool for investors and issuers to assist them in prioritising investments that truly contribute to addressing climate change, both from a resilience and a mitigation point of view. It is made up of the overarching Climate Bonds Standard detailing management and reporting processes, and a set of Sector Criteria detailing the requirements assets must meet to be eligible for certification.

The Sector Criteria cover a range of sectors including solar energy, wind energy, marine renewable energy, geothermal power, low carbon buildings, low carbon transport, and water. The Certification Scheme requires issuers to obtain independent verification, pre- and post-issuance, to ensure the bond meets the requirements of the Climate Bonds Standard.

2.2 This document and supplementary information available

This document details:

- The current scope of protected agriculture assets and projects eligible for certification under the Climate Bonds Standard – Section 3;
- The specific Criteria under which these assets and projects are eligible for certification – Section 4.

Supporting information is available at [<https://www.climatebonds.net/standard/protected-agriculture>] as follows:

- Protected Agriculture Background Document: contains the research and rationale done to determine the Criteria in this document
- Summary document introducing the Criteria for Mexican Protected Agriculture Assets
- [The Climate Bonds Standard V2.1](#): contains the requirements of the overarching Climate Bonds Standard
- [The Climate Bonds Standard & Certification Scheme Brochure](#): provides an overview of the Climate Bonds Standard & Certification Scheme, of which these Criteria are a part

For more information on the Climate Bonds Initiative and the Climate Bonds Standard and Certification Scheme more broadly, see www.climatebonds.net.

2.3 Revisions to these Criteria

These Criteria will be reviewed one year after launch, or potentially earlier if the need arises, at which point the CBI will take stock of issuances that arise in the early stages and any developments in improved methodologies and data that can increase the climate integrity of future bond issuances. After the first review, the Criteria will be reviewed again periodically on a needs basis as technology and the market evolves. As a result, the Criteria are likely to be refined over time, as more information becomes available. However, certification will not be withdrawn retroactively from bonds certified under earlier versions of the Criteria.

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3. Scope of the Mexican Protected Agriculture Criteria

3.1 Key elements to the Criteria

As a general principle, protected agriculture-related bonds will meet the requirements of the Climate Bonds Standard if the associated assets and use of proceeds meet all the following requirements:

- Promote GHG mitigation through reduced emissions; and
- Promote adaptation to climate change and facilitate increased climate resilience in the systems in which they are located.

Complete details of the requirements are in Section 4 of this document.

3.2 Assets in scope

These Criteria apply to assets and projects relating to:

- Protected agriculture facilities in Mexico
- Dedicated infrastructure and support facilities to protected agriculture in Mexico
- The production of tomatoes, bell peppers, cucumbers, berries, and other horticultural crops that exhibit similar characteristics.

Further details of the scope are in Table 1, below.

Table 1 presents indicative protected agriculture related assets that could be included in a Certified Climate Bond, subject to meeting the specific Criteria described in Section 4. Table 1 is provided for illustrative purposes and is not an exhaustive list of every possible asset that would be eligible. Bonds financing multiple projects may also have to prove compliance with other Sector Criteria to be eligible for Climate Bonds Certification. For example, if a bond included both protected agriculture assets and water related assets on the same site it would be necessary for the issuer to prove compliance with both the Protected Agriculture Criteria and the Water Criteria.

To guide the interpretation of the requirements, Table 1 provides signposting as follows:

- A green circle indicates these assets, when fully described and documented, automatically meet the Criteria requirements, with no further disclosure or documentation required
- An orange circle indicates that the eligibility of these assets is conditional on meeting specific requirements
- A red circle indicates that these assets are not eligible for certification under any circumstances

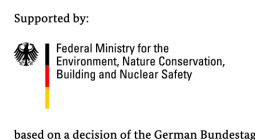
Table 1: Illustrative use of bond proceeds eligible under the Mexican Protected Agriculture Criteria

Assets	Example use of proceeds	Mitigation	A&R
Protected agriculture, horticultural greenhouses and shade-houses that operate or are under construction to operate.	The establishment, acquisition, expansion or ongoing management of protected agriculture facilities in Mexico, including: <ul style="list-style-type: none"> ▪ PVC film or glass greenhouses ▪ Shade houses ▪ Systems for closure / isolation, precision fertilizer and other chemical use ▪ Non-soil substrates 	●	●
	The establishment, acquisition, expansion or ongoing management of infrastructure and support facilities dedicated to protected agriculture in Mexico, including: <ul style="list-style-type: none"> ▪ Air and light control systems ▪ Precision plant nutrition systems ▪ Insect protection 	●	●

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3.3 Assets out of scope

Table 2 presents the assets and projects that are not eligible for Certification under the Protected Agriculture Criteria.

Table 2: Assets and projects *not eligible* for Certification under the Mexican Protected Agriculture Criteria

Assets/projects	Explanation for exclusion
Pesticide or fertilizer production	Pesticide or fertilizer production is considered out of scope of the Protected Agriculture Criteria even if the production is dedicated to protected agriculture facilities. It can be a very energy and chemical intensive process and these Criteria do not have requirements to ensure that process is low carbon or climate resilient.

3.4 Alignment with other Sector Criteria

Table 3 explains where potential crossovers with other Climate Bonds Standard Criteria could be and presents which Criteria apply to these assets and project types.

Table 3: Assets and projects related to protected agriculture, but eligible for Certification under other Sector Criteria

Assets/projects	Covered under...	Explanation
Installation vehicles	Low Carbon Transport Criteria	Vehicles must comply with the Climate Bonds Standard Low Carbon Transport Criteria. They are not automatically eligible under dedicated support facilities, as can have material impacts on the emissions profile of the crop production if they are not low emission vehicles.
Irrigation and other water related infrastructure	Water Criteria	The Climate Bonds Standard Water Criteria are designed to cover all types of water infrastructure, including drip and micro-aspersion irrigation. To prevent confusing crossovers all water infrastructure will remain certifiable under the Water Criteria.

4. Eligibility Criteria for Mexican Horticultural Greenhouse Assets

To demonstrate compliance with the following Criteria, in accordance with the Climate Bonds Standard V2.1, it is the issuer’s responsibility to provide the information to prove compliance with each component of these Criteria. Verifiers must include this information in the scope of verification.

In accordance with the overarching reporting timetable as laid out in the Climate Bond Standard V2.1, issuers are required to provide this information as follows:

- Pre-issuance reporting (supported by independent verifiers report): Full disclosure information.
- Post-issuance reporting (supported by independent verifiers report): Any amendments to the information provided pre-issuance to be disclosed.
- Annual reporting thereafter: Any amendments to the previously provided information should be reported by exception as changes arise.

4.1 Mitigation Component

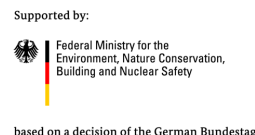
Assets listed in Table 1 with an associated orange circle in the mitigation column must adhere to the following requirements:

1. Operations are fully enclosed with permeable or non-permeable air envelope and designed for year-round production
2. Where heating is used, it is only for defense against cold in winter months
3. Only uses passive cooling, active ventilation is permitted only for managing heat and relative humidity
4. Where irrigation¹ is used, it must be drip, micro-aspersion or fertigation only, with monitoring

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5. Commitment to reuse or recycle used plastic sheeting and tubing, with a demonstrable policy or plan

Notes: Heating of a greenhouse can be provided either by passive or active modes. A passive mode uses the sun's rays to heat a surface inside the greenhouse directly. In comparison, an active mode uses additional thermal energy, which is fed inside the greenhouse using an air or water heating system.

4.2 Adaptation & Resilience Component

Compared to open-field production, greenhouses and other forms of protected agriculture represent a favorable strategy for increasing resilience through the following: (i) Greatly reducing vulnerability and increasing resilience to changing meteorological conditions and related physical (e.g. soil erosion) and pathogen (e.g. insects, bacteria, fungi) impacts; (ii) Reducing water consumption through efficiency and recovery; and (iii) Improving farm income through productivity increases, improved crop price based on quality and seasonality, and reduced crop damage and loss.

For these reasons, there is just one requirement on the adaptation & resilience component:

1. No use of chemicals in the Stockholm Convention² or Ia or Ib in the WHO classification of pesticides by hazard³. Compliance with the Rotterdam Convention⁴ where relevant.

4.3 Recommended best practice

For higher levels of transformative impact it is recommended that issuers also comply with the below:

1. Sealed operations with non-permeable soil cover and integral (non-permeable air envelope
2. Production in substrates
3. Use water recovery and re-use systems
4. Disclose the use of chemicals in class 2 of the WHO classification of pesticides by hazard⁵

Issuers that do comply with any of the above should disclose this to demonstrate their best practice.

Climate Bonds Certification is not dependent on compliance with 4.3 and verification will not check compliance with 4.3.

² <http://www.pops.int/>

³ https://www.who.int/ipcs/publications/pesticides_hazard/en/

⁴ <http://www.pic.int/>

⁵ https://www.who.int/ipcs/publications/pesticides_hazard/en/

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Appendix I: Criteria Reviewers

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