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# Greenhouse gases —

## Part 5: Guidance on activities and techniques used remotely in conducting verification and validation of greenhouse gas statements

*Gaz à effet de serre —*

*Partie 5: Recommandations concernant les activités et les techniques utilisées pour la vérification et la validation à distance des déclarations des gaz à effet de serre*

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# Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 7, *Greenhouse gas and climate change management and related activities*, in collaboration with Subcommittee SC 2, *Environmental auditing and related practices*, and ISO/CASCO, *Committee on conformity assessment*.

A list of all parts in the ISO 14064 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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# Introduction

This document provides guidance on risk considerations in cases where greenhouse gas (GHG) verification/validation activities and techniques are carried out remotely, noting that most activities and techniques can be used either in person or remotely.

Relying on evidence gathered remotely can pose unique verification and validation risks (inherent, control and detection). For example, when the verifier/validator is limited in the use of their senses (restricted sight, touch, sound, smell), to assess whether evidence is sufficient and appropriate, detection and control risks can increase. Understanding risks allows them to be managed during verification and validation activities.

The use of information and communication technology (ICT) has become commonplace. Verification and validation bodies (VVBs) routinely employ ICT to communicate with clients and responsible parties and to share information. The sharing of documents in the form of electronic files is more likely to occur than the exchange of paper documents. In short, the work of verifiers and validators is increasingly based on the review and secure storage of digitized information.

Activities and techniques used remotely, such as mobile LiDAR (light detection and ranging) systems, drone surveys, the Sentinel family of satellites and other international satellites are becoming commonly used for gathering GHG-evidence used in verification and validation engagements. In addition, interviews with key personnel are being conducted remotely via virtual meetings or closed-circuit camera views. In some cases, activities and techniques are deployed remotely instead of in-person visits to facility operations.

Many verification/validation bodies are engaged in the planning and execution of verification and validation engagements where some activities and techniques can be applied remotely. This document provides guidance on carrying out verification/validation activities remotely in accordance with ISO 14064-3 and ISO 14065 and promotes a consistent approach for achieving verification/validation objectives. An effective verification/validation engagement using activities and techniques remotely should be adequately planned by a verifier/validator who is competent in using activities and techniques remotely. Such competence is in addition to those requirements for verification and validation teams specified in ISO 14066.

This document provides principles, practices and guidance where GHG verification and validation activities and techniques are employed remotely.

Using this document will help verifiers/validators to identify, minimize and mitigate the unique verification/validation risks associated with the application of activities and techniques used remotely.

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# Greenhouse gases —

# Part 5:
# Guidance on activities and techniques used remotely in conducting verification and validation of greenhouse gas statements

## 1 Scope

This document gives guidance on planning, evaluating the risks, and conducting activities and techniques remotely for internal or external verification/validation (i.e. first, second and third party) of greenhouse gas (GHG) statements.

It is applicable to cases where a verifier determines that the circumstances defined in ISO 14064-3:2019, 6.1.4.2, do not require an in-person site or facility visit or a validator determines that an evidence-gathering plan can include activities and techniques performed remotely as defined in ISO 14064-3:2019, 7.1.6.

Activities and techniques applied remotely can be used by a verifier for activities such as inquiry of persons and documents, analytical testing, recalculation, estimate testing, cross-checking and reconciliation when a verifier's risk assessment does not require the use of on-site activities and techniques.

Activities and techniques applied remotely can be used by a validator when their use does not compromise the validator's ability to assess whether the characteristics of GHG activities (see ISO 14064-3:2019, Clause 7) will meet the needs of intended users.

This document is applicable to verifications/validations that use:

— a combination of activities and techniques applied remotely and on-site;

— exclusively activities and techniques applied remotely.

NOTE Legislation can differ from jurisdiction to jurisdiction. It is the user's responsibility to determine how applicable legal requirements relate to this document.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14065:2020, *General principles and requirements for bodies validating and verifying environmental information*

ISO 14066:2023, *Environmental information — Competence requirements for teams validating and verifying environmental information*

ISO 14064-3:2019, *Greenhouse gases — Part 3: Specification with guidance for the verification and validation of greenhouse gas statements*

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# 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 14065:2020, ISO 14066:2023, ISO 14064-3:2019 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

**3.1**
**information and communication technology**
**ICT**
technology for gathering, storing, retrieving, processing, analysing and transmitting information

[SOURCE: ISO/IEC 30071-1:2019, 3.4]

# 4 Considerations in selecting activities and techniques to be applied remotely

## 4.1 General

Where the activities and techniques used remotely for verification/validation require specific technical expertise, the verification/validation team should ensure that such specific technical knowledge or skill is available to them.

Verification/validation teams retain the authority to perform the activities in person in cases where activities and techniques planned to be applied remotely pose an unacceptably high risk of compromising the integrity of the verification/validation process.

## 4.2 Activities and techniques applied remotely during verification/validation

The verification/validation teams may use activities and techniques remotely to conduct verification/validation when the verifier/validator determines that the risk associated with the use of such activities and techniques in a verification/validation is acceptable and no greater to that of an on-site verification/validation.

# 5 Pre-engagement: Evaluating the potential use of activities and techniques applied remotely during verification/validation

In performing the pre-engagement activities defined in ISO/IEC 17029:2019, 9.2.2, and ISO 14065:2020, 9.2, paragraph 2, the person performing pre-engagement activities may consider the extent to which activities and techniques applied remotely can be used when performing the verification/validation activities.

The person performing pre-engagement activities should take into account the risks and opportunities of conducting activities and techniques remotely. The application of activities and techniques remotely should not affect verification/validation effectiveness.

The person performing pre-engagement activities should document the expected activities and techniques to be applied remotely prior to commencing the engagement. In some circumstances, attention should be given to accessibility, privacy, inclusion and cultural requirements. Local or site-based considerations should be identified (e.g. bio-security and privacy when equipment such as drones is used in an agricultural or wildlife habitat context and also flies over neighbouring properties).

The person performing pre-engagement activities should ensure that any agreement reached with the responsible party for the provision of verification/validation services includes conditions on the successful performance of activities and techniques intended to be applied remotely. The agreement does not pre-empt

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