Technical Report

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Wood and wood-based products — Examples of calculating displacement potentials for wood-based products and considerations for further analyses

Bois et produits à base de bois — Exemples de calcul des potentiels de déplacement pour les produits à base de bois et considérations pour d'autres analyses

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Foreword

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This document was prepared by Technical Committee ISO/TC 287, *Sustainable processes for wood and wood-based products*.

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.

Introduction

ISO 13391-1 defines a framework for calculating greenhouse gas dynamics of wood and wood-based products, see Figure 1. The framework identifies the displacement potential relating to displacing alternative products by using wood and wood-based products. This includes quantification of the value chain emissions of both the wood-based product and the alternative product, as shown in Figure 1. Displacement is composed of two parts, the greenhouse gas emissions related to the wood-based product(s) and the potentially prevented greenhouse gas emissions related to the alternative product(s), see Figure 1.

ISO 13391-1 provides calculation guidance for all aspects of the greenhouse gas emissions related to the wood-based product's value chain. ISO 13391-3 considers the emissions of alternative products and further elaborates on the calculation of displacement potentials. This document provides additional background and examples to users of ISO 13391-1 and ISO 13391-3. It includes aspects of the calculations as such, and also the wider context of analysing factors that can affect to what extent the displacement potential is realised.

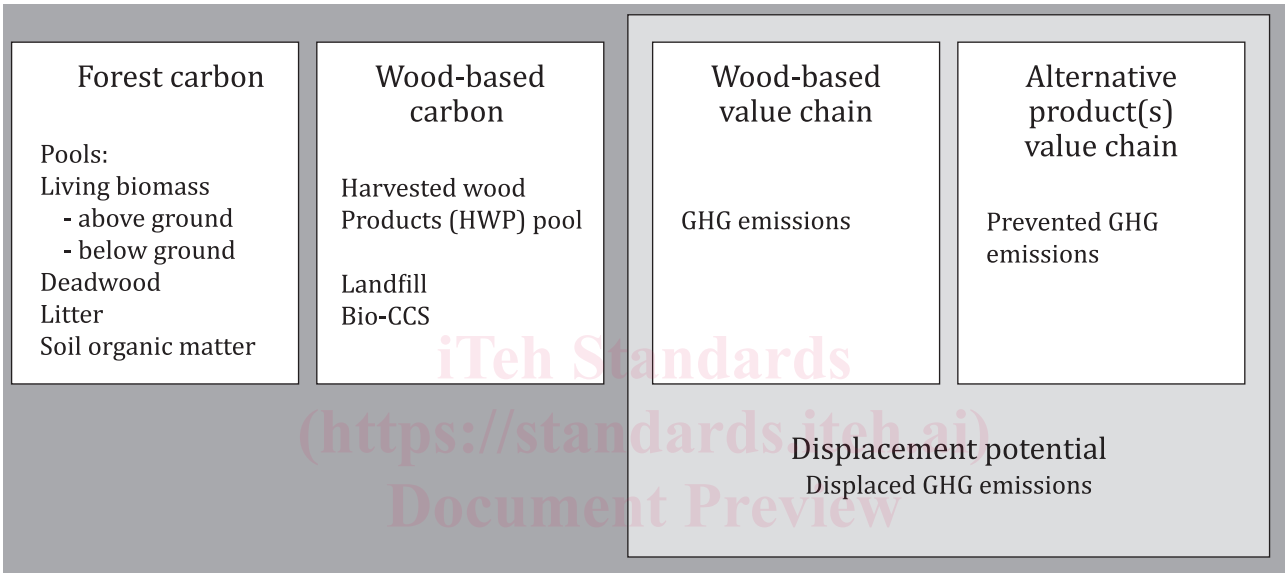

Figure 1 — Illustration of the components of the greenhouse gas dynamics of wood and wood-based products

This document provides background and examples in the following areas:

— Clause 4: Approaches for identifying alternative products, i.e. products with similar functionality but with different material origins that can be displaced by wood-based products. This pairing of alternatives is a basis for the calculation of displacement potentials.

— Clause 5: Examples of how to establish displacement factors, i.e. the quantity of greenhouse gas emissions avoided through displacement (in carbon dioxide equivalents) per unit of biogenic carbon (in carbon dioxide equivalents) contained in the wood-based product(s). The displacement factors are thus expressed in t CO_2e/t CO_2e and are as such unitless.

— Clause 6: Examples of tier 1 displacement factors for broad product categories based on the literature.

— Clause 7: Review of factors that can influence realisation of displacement potentials in society, including the development of the wider economy and consumption patterns.