

Title Product allocation of greenhouse gases produced by cool storage facilities
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Abstract

This paper introduces some methodological issues that arise when assessing greenhouse gas (GHG) emissions associated with a refrigerated product where several products are stored in one refrigeration facility. These products may be in the same room, or alternatively products in different rooms (at different temperatures) may use a common refrigeration plant. Assessment of the GHG emissions associated with any one product is complicated by differences in heat load (as influenced by initial product cooling, product respiration, room insulation quality, room door usage, seasonal weather conditions and storage temperature), refrigeration system effectiveness (Coefficient of Performance) and facility usage (space utilisation) on a daily basis. A simple hypothetical example is used to compare the results obtained from three alternative allocation methods for allocating GHG emissions between different stored products: allocation by mass (tonnes), storage time (tonne.day), and on the basis of heat load calculation and refrigeration effectiveness estimation (kWh).