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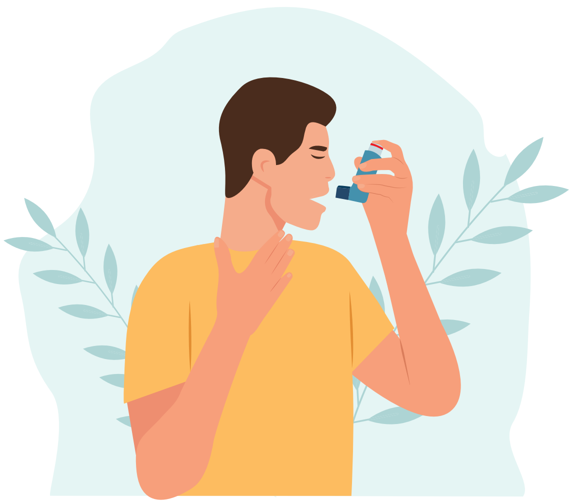
Executive Summary

According to the European Union Statistics on Income and Living Conditions (EU-SILC), in 2021, almost 17% of the total population in the EU27 countries lived in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames or floors (Eurostat, 2022). A large number of studies conducted across many geographical regions show that there is a consistent association between indoor dampness/mould and asthma cases. Energy efficiency retrofits in residential housing can reduce indoor dampness to different extents and thus, potentially, asthma.

The multiple impact (MI) indicator is avoided burden of asthma due to the reduced exposure to indoor dampness over a certain time period as a result of energy efficiency improvements in the residential building sector. The standard method for assessing the Environmental Burden of Disease (EBD) is applied (Murray and Lopez, 2017). Since asthma can be attributed not only to dampness but also to many other factors, a key step of quantification is to attribute the share of current asthma prevalence to the exposure to dampness. The population attributable fraction (PAF) is an indicator that represents the proportion of the total disease burden that can be ascribed to a specified risk factor among many others (Braubach *et al.*, 2011). The PAF of asthma due to exposure to indoor dampness is a function of the population living in buildings with high dampness, which is projected by the MICAT energy poverty model.



As a consequence, the asthma disease burden attributable to exposure to dampness in a specific country (AEBDAc) is calculated as follows:

EBDA: total environmental disease burden of asthma

Multiple Impacts Calculation Tool

MICAT

Multiple Impacts Calculation Tool

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