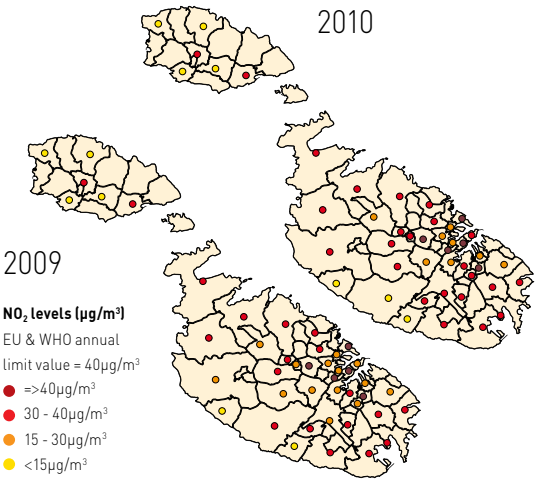
A4 NITROGEN DIOXIDE CONCENTRATIONS

Key policy question: Do nitrogen dioxide concentrations in Malta meet EU air quality standards?

Nitrogen dioxide (NO_2) has adverse affects on health, since high concentrations of this gas cause inflammation of the airways and reduced lung function.[26] Nitrogen dioxide forms acids on contact with water vapour, as well as nitrates and other harmful compounds on interaction with other particles.[27] NO_2 is a direct result of fossil combustion,[28] and to a lesser extent a result of natural sources such as lightning. It is principally generated through energy generation and road transport, as its presence in urban centres illustrates. Further chemical reactions lead to the formation of nitrate particles and NO_2 is one of the most important sources of very fine particles such as $PM_{2.5}$. Between 2009 and 2010 the annual average national NO_2 concentration decreased from 28.1µg/m^3 to 26.3µg/m^3, remaining well below the 40µg/m^3 EU and WHO limit value. As in 2009, in 2010 annual average values exceeded annual EU standards in 5 localities: Floriana (55.2µg/m^3); Ħamrun (46.4µg/m^3); Fgura (46µg/m^3); Sliema (41.4µg/m^3); and, Birkirkara (40.9µg/m^3). In addition, 18 individual sites registered NO_2 levels higher than the EU and WHO limit, down from 22 sites in 2009, with Valley Road recording the highest value (82.4`). In the same year, the hourly limit value (not to be exceeded for more than 18 hours per year) was exceeded once at Kordin and 18 times in Msida.



Source: MEPA