

## Questions and answers on Radon

### What is Radon?<sup>i</sup>

Radon is a colourless, odourless naturally occurring radioactive gas.

- It is a by-product of the radioactive decay of naturally occurring radium, thorium and uranium. Radon further decays to form other radioactive particles.
- When inhaled, these particles can deposit into the lungs and can result in a radiation dose which may damage cells in the lung and ultimately increase the risk of lung cancer.
- Radon can dissolve in water and deposit in ground water, (wells, underground water storage facilities and water distribution points). When water contaminated with radon is used in the home, it can spread out into the air. To a lesser extent, some radon might still stay in water. When drinking water containing radon is absorbed or ingested, it presents a risk of developing internal organ cancers, primarily stomach cancer.
- As a gas it can pass from underlying rocks to the surface through soil and building cracks. Ground floor, underground occupational and public places tend to have an elevated concentration of radon. In an enclosed environment radon would accumulate to high concentrations and thus increasing health risk. Proper ventilation would reduce the radon concentration to less harmful concentrations.
- As radon disperses into outdoor environment, it dilutes into low concentrations which does not impose a health risk.



### What is known about the Radon levels in Malta?

- Local past studies on radon have shown that the reference level in EU legislation of  $300\text{Bq m}^{-3}$  is not exceeded and that the average level was in the range of 29 to  $55\text{ Bq m}^{-3}$ .<sup>ii</sup>
- In the most recent study performed by the Commission for the Protection from Ionising and Non-ionising radiation in subterranean areas during the period 2020-21, the reference level was once again not exceeded, and the average value was around  $100\text{ Bq m}^{-3}$ .

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<sup>i</sup> "Radon". World Health Organization. January 25, 2023. <https://www.who.int/news-room/fact-sheets/detail/radon-and-health>

<sup>ii</sup> Mifsud, I., Amato-Gauci, A. J., Licari, L., & Sammut, M. (1997). Preliminary Investigation on Radon Levels in Local Dwellings. *Xejnza*, 2(1), 34–38.

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