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A photograph of the interior of the Central Bank of Malta building. The space is modern and minimalist, with a large, curved reception desk in the foreground. The walls are made of light-colored stone or concrete, and the ceiling is a series of white, rectangular panels. The lighting is warm and ambient, with a sunset or sunrise sky visible through a large opening in the background. The overall atmosphere is one of architectural elegance and modern design.

# CENTRAL BANK OF MALTA DISCUSSION PAPER



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## **Is Malta's economy becoming more emissions-intensive?**

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## Abstract

Recent media reports claim that Malta's recent period of strong economic growth has rendered its economy more greenhouse-gas emissions-intensive. These conclusions are largely the product of statistical definition differences rather than a genuine deterioration in environmental performance. While Eurostat data suggest a post-2013 increase in Malta's emissions intensity, this reflects the application of the residence principle, whereby emissions are attributed to Malta if generated by entities registered domestically, irrespective of their physical location. By contrast, emissions calculated under the United Nations Framework Convention on Climate Change, which adopts a territorial approach, show only modest growth in emissions alongside substantial economic expansion, implying continued improvements in emissions intensity. The divergence is driven mainly by international aviation linked to Malta's fast-expanding aircraft registry. Adjusting for aviation activity occurring outside Maltese airspace reveals that Malta's emissions intensity has continued to decline, reaching historically low levels, though challenges remain in meeting sector-specific climate targets.

**JEL Classification:** L93, Q53, Q58

**Keywords:** greenhouse gas emissions, air transportation, Maltese economy.

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## Executive Summary

The paper examines whether Malta's recent strong growth has made its economy more emissions-intensive, a claim frequently made in local media and based largely on Eurostat data. Yet this conclusion is misleading and arises primarily from differences in statistical methodologies rather than from a genuine deterioration.

Eurostat data indicate that Malta is the only EU country to have experienced an increase in emissions intensity since 2013 and ranks among the highest emitters per capita. However, this outcome reflects the application of the “residence principle,” under which emissions are attributed to Malta if they are generated by entities registered in Malta, regardless of where the emissions physically occur.

Up to the mid-2020s, Malta's emissions intensity declined significantly, particularly following major energy-sector reforms. As a result, emissions from the energy sector fell sharply while economic activity accelerated, leading to a rapid reduction in emissions intensity that outpaced the EU average.

After 2018, Eurostat data show a sharp increase in Malta's total GHG emissions and emissions intensity, a trend that appears counterintuitive given Malta's continued shift towards high value-added, low-emission service sectors. This paradox disappears when one adopts the United Nations Framework Convention on Climate Change methodology, which attributes emissions based on territorial occurrence rather than business residence. Under the UN methodology, Malta's GHG emissions rose only modestly over the same period, while economic output increased substantially, implying a decoupling of emissions from economic growth, and a further improvement in emissions intensity.

The divergence between the two methodologies is driven almost entirely by air transport. Malta has developed a large international aircraft registry, with hundreds of aircraft registered under the Maltese flag but operating predominantly outside Maltese airspace. Under Eurostat's residence-based accounting, emissions from all flights operated by these aircraft are attributed to Malta, causing transport-sector emissions to dominate national totals.

When emissions are adjusted to reflect only aviation activity linked to Maltese airspace, the resulting emissions totals closely align with those reported under the UN methodology. On this basis, Malta's emissions intensity continued to decline after 2018 and, by 2024, stood at roughly a quarter of its 2005 level, representing a historic low.

This improvement does not mean Malta faces no climate-policy challenges. In particular, Malta still has projected gaps in meeting EU effort-sharing targets for sectors such as domestic transport, agriculture, waste, and buildings. However, public debate has often conflated different indicators and misinterpreted projections, leading to exaggerated or incorrect claims about Malta's overall emissions trajectory.

In conclusion, Malta's economy is not becoming more emissions-intensive in real or territorial terms. Instead, statistical definitions—especially those related to international aviation—have created confusion and fuelled misleading narratives. Clearer communication of climate indicators and methodologies is essential to ensure informed policymaking, maintain investor confidence, and support Malta's long-term transition towards climate neutrality.

## 1. Introduction

Achieving climate neutrality is one of the key objectives of the Maltese Government. In fact, the Malta Vision 2050 public consultation document argued that “with the EU’s 2050 climate neutrality target in sight, this is the ideal moment to chart a clear and ambitious long-term vision”<sup>2</sup>, confirming that this objective is a key cornerstone of national development. While expressing concerns about pollution from the transport sector, the European Commission in its 2025 assessment on Malta’s policies noted that “Air quality in Malta has improved, with some exceptions ... The emissions of several air pollutants have decreased significantly in Malta since 2005, while GDP growth has continued”.<sup>3</sup> It also specified that “Greenhouse gas (GHG) emissions in Malta are below the EU average”.<sup>4</sup> Given that in recent years, Malta’s economy and population have grown very rapidly, the overall trend in GHG emissions is very promising and reflects some notable changes in economic behaviour, prodded by significant public investment and generous financial incentives. In fact, European Commission (2025b) reports that “in 2024, net GHG emissions per capita in Malta were 3.9 tonnes of CO<sub>2</sub> equivalent, below the EU average of 6.8 tCO<sub>2</sub>-eq” and that “the GHG intensity of GDP (i.e. net GHG emissions over GDP) was 122 gCO<sub>2</sub>-eq/EUR, below the EU average of 215 gCO<sub>2</sub>-eq/EUR”. The latest National Inventory Report (NIR)<sup>5</sup> on national emissions confirms this downward trend as total emissions when compared to the 2005 total emissions decreased by 27.4% in 2024.

Yet several recent local media articles<sup>6</sup> have argued the opposite, stating that Malta’s GHG emissions are increasing, and arguing that it is the only EU country where emissions intensity is growing. These diametrically opposite assessments present stakeholders with very mixed signals as to the progress of Malta’s climate neutrality ambitions. The scope of this discussion paper is to clarify this issue – which essentially reflects the application of two different methodologies used to establish GHG emissions. While both methodologies have validity, it is important for stakeholders to be aware of their inherent differences as otherwise policy discussions or recommendations would be misguided. In essence, the difference reflects Malta’s growing success in attracting foreign direct investment in aviation services, rather than a faltering of the nation’s resolve to reduce GHG emissions.

## 2. Trends in greenhouse gas emissions: Malta compared with the rest of the European Union

Malta is required to reduce its GHG emissions by 19% by 2030 under the EU’s Effort Sharing Regulation (ESR).<sup>7</sup> This target applies to certain emitting sectors (but not all) including fuel use in transport and buildings, waste, industrial processes and product use and agriculture. This target is distributed among

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<sup>2</sup> Government of Malta (2025).

<sup>3</sup> European Commission (2025a).

<sup>4</sup> Ibid.

<sup>5</sup> [https://climate-laws.org/document/malta-national-inventory-report-nir-2025\\_7684?cfn=oil](https://climate-laws.org/document/malta-national-inventory-report-nir-2025_7684?cfn=oil)

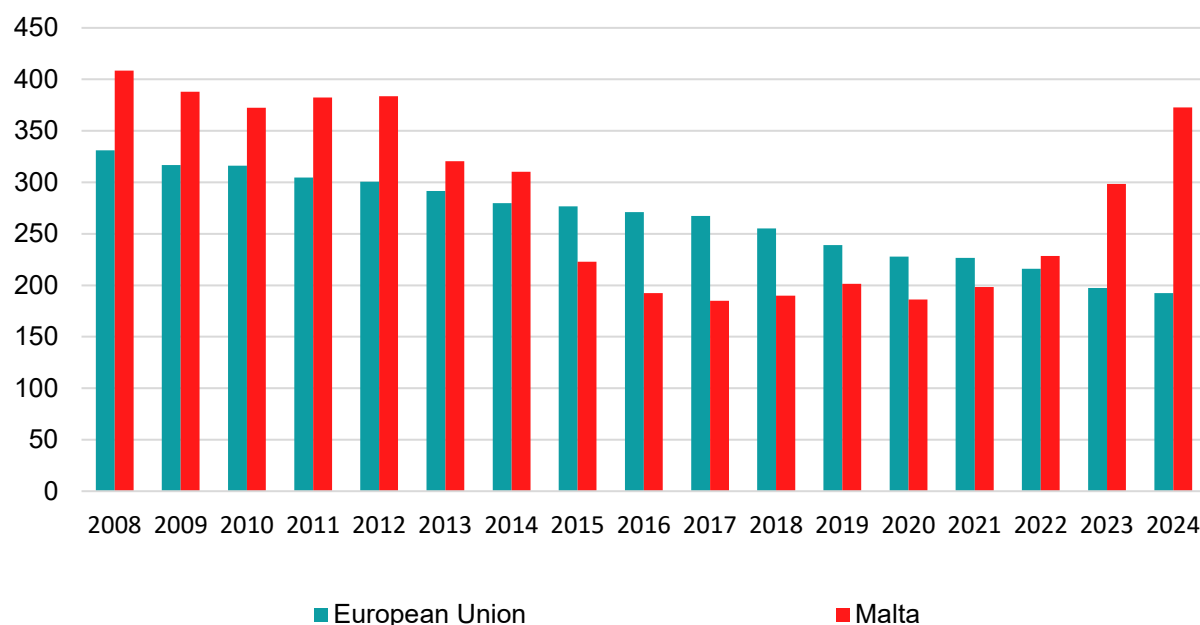
<sup>6</sup> <https://www.independent.com.mt/articles/2026-01-26/local-news/Malta-is-the-only-EU-Member-State-to-have-increased-its-emissions-intensity-since-2013-PN-6736286683> ; [https://www.maltatoday.com.mt/news/national/139395/pn\\_malta\\_only\\_eu\\_state\\_to\\_increase\\_emissions\\_intensity\\_since\\_2013](https://www.maltatoday.com.mt/news/national/139395/pn_malta_only_eu_state_to_increase_emissions_intensity_since_2013) ; <https://timesofmalta.com/article/malta-eu-state-increased-emissions-intensity-pn-slams-government.1123119>

<sup>7</sup> The EU’s ESR covers emissions that are not captured under the Emissions Trading System (ETS) carbon price regime and relate to domestic transport, buildings (commercial and residential), agriculture, waste, small industry and land-use. If one includes both ESR and ETS emissions, Malta will be reducing emissions by up to 41% by 2030, compared to 2005 levels.

all Member States compared to their 2005 levels.<sup>8</sup> However, Eurostat (2025) reported that “only Malta (+17%) has seen an increase in its emissions intensity since 2013” and that “Denmark, Luxembourg, Ireland and Malta were the largest emitters of greenhouses gases per capita in 2024 across the EU”. This is the main source of recent local media articles.

An economy’s emissions intensity is calculated by dividing the amount of GHG emissions by real gross value added. This allows one to measure how many grams of GHG emission, are created on average by each euro of economic activity. Figure 1 shows that up to 2014, Malta emitted significantly more than the European Union (EU) did to generate the same unit of economic activity. In fact, even though emissions intensity was declining in both Malta and the EU, the improvement in Malta was lagging, such that the level of emissions intensity in Malta remained more than a quarter higher than that of the EU by 2012. Thereafter a sharp pickup in economic activity in Malta combined with a significant drop in emissions led to the islands’ emissions intensity halving by 2017, with a decline about three times faster than that observed across the EU. Subsequently, the situation for Malta shifted substantially with the degree of emissions intensity more than doubling, going back to the level last seen in 2010.

**Figure 1: Emissions Intensity**



Source: Eurostat

Notes: Green House Gasses (GHG) per euro of economic activity

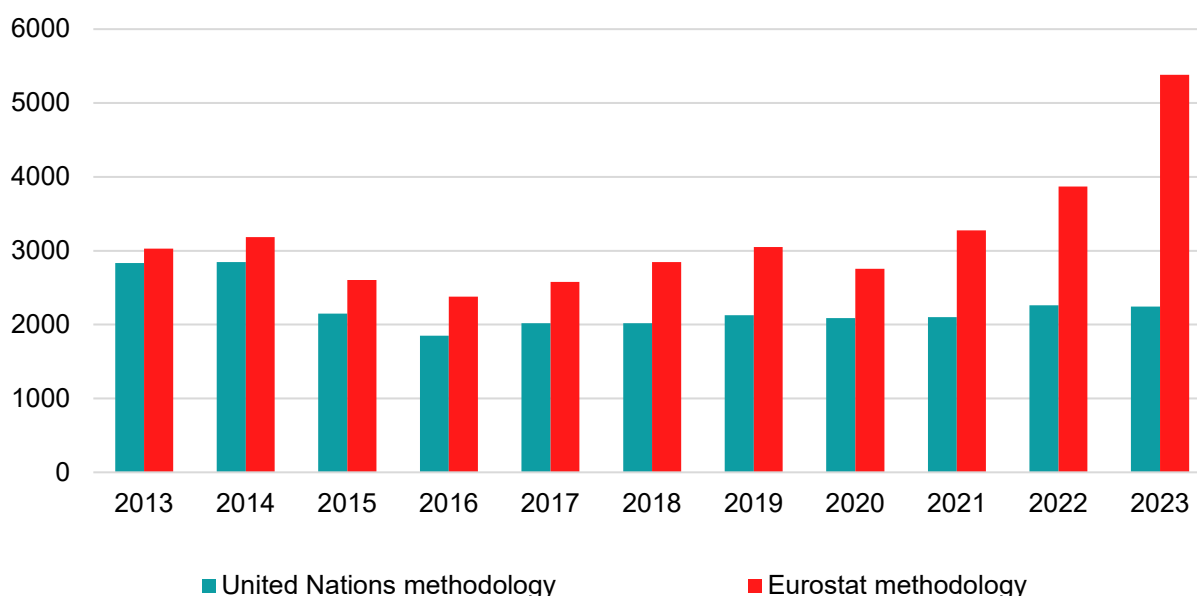
The abrupt change of trend in the mid-2010s reflected substantial energy sector reforms. Rapa (2017) gives a concise outline of these reforms, which essentially led to the dismantling of a power plant operating with heavy fuel oil, the connection of Malta to the European energy grid via an interconnector, and the start of operation of a power plant that utilises natural gas. Emissions generated by the energy sector fell from 2,060 thousand tonnes in 2012 to just 700 thousand tonnes in 2018, or from 53% to 25% of total GHG emissions. At the same time, besides leading to a reduction in emissions, the energy reforms led to a lower cost of energy and therefore helped boost economic activity by up to 3.7% under certain assumptions about the international price of oil.

<sup>8</sup> European Parliament and The Council of the European Union (2023).

While the emissions of the energy sector remained relatively stable despite the continued rapid growth of the Maltese economy, and the rise in the population, overall GHG emissions and emissions intensity - according to Eurostat - rose very sharply after 2018, with only a minor dip during the pandemic. By 2024, GHG emissions were more than two and a half times the level observed in 2018, and about those seen in 2012 at the peak of the use of the heavily emitting heavy fuel oil power station. Given that the economy continued to shift more towards high value-added services, i.e. sectors that typically are not high emitters of GHG, this spike in emissions is quite counterintuitive.

Climate Action Authority (2026) points out that “the methodology adopted by Eurostat is one which focuses on the notion of the ‘residence’ principle which is interpreted as the emissions of those businesses which are officially registered as Maltese residents on the national business registry, irrespective of whether their activity is carried out locally or outside of the territory”. This definition differs from that adopted by the United Nations (UN) Framework on Climate Change, where emissions are based on whether or not they occurred within the Maltese national territory. In fact, Indicator 13.2.2 under the United Nations Sustainable Development Goals as reported by the NSO on its own website<sup>9</sup> indicates a very different trend for Malta, as can be seen in Chart 2. Rather than spiking after 2018, the UN definition GHG emissions show an 11% rise for a period during which Malta’s real value added rose by 37%.

**Figure 2: GHG Emissions Under Different Methodologies**



Source: Eurostat, National Statistics Office  
 Notes: Gigagrams of CO2 equivalent

This points to two very different conclusions depending on what data set one uses. The Eurostat data set show Malta’s emissions intensity worsening, while the UN data – on which the global climate agreements are based – show a substantial improvement as Malta’s gross value added grew much more sharply than emissions. In fact, an UN-based measure of emission intensity would suggest that by 2023, Malta’s situation had improved by nearly a quarter compared to 2018. Rather than having gone back to 2012 levels, Malta’s emissions intensity stands at a historic low, about half what is implied

<sup>9</sup> <https://sdgindicators.nso.gov.mt/13-2-2/>

by the Eurostat methodology. Instead of Malta being among the top three emitters of GHG per capita, the country is among the lowest three emitters, just like it was in 2018.

### 3. Understanding the impact of air transportation on the Maltese's economy emissions intensity

It is evident that the cause behind these completely different conclusions lies in the difference in definitions used by Eurostat and the UN, and by the way they affect the emissions of the air transportation sector. Climate Action Authority (2026) notes that “76% of the total emissions of 2024 were generated by the transport and storage sector (specifically due to the sub-category pertaining to air transport)”, including international air transport, while in the EU this sector only has a share of 18%. The same report notes that “when the GHG intensity for Malta is worked out excluding air transport and maritime transport, one may note that GHG intensity per every euro generated between 2020 and 2024 in fact reduced by 19% rather than increased as per Eurostat's figures which summed up show a growth rate of 87.2%”.

Sant (2025) reports that by the end of 2024, there were 913 aircraft registered on Malta's aircraft registry. Under the Eurostat methodology all flights made using these aircraft and their associated GHG emissions are included in Malta's total emissions. By contrast the UN only includes activities of flights conducted within the Maltese airspace, which land in or depart from the Maltese islands. Sant (2025) notes that the operations of Malta-flagged aircraft were mostly located outside the islands' airspace with Maltese aircraft flying practically everywhere in the world in 2024, with nearly 20% of the total not even happening in EU airspace.

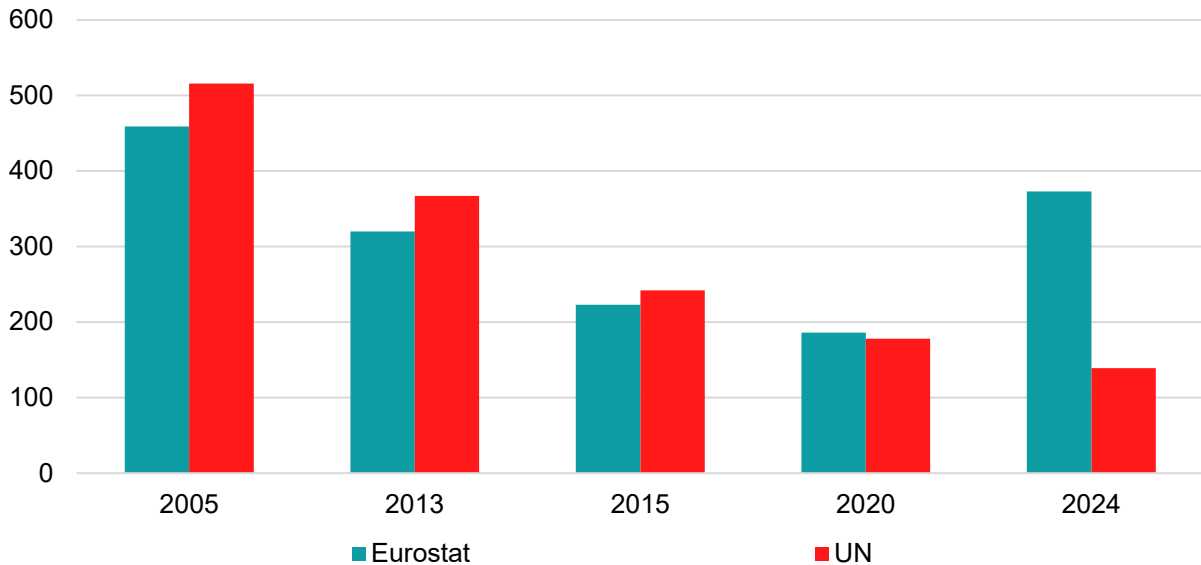
Up to 2017, Eurostat data indicated relatively stable GHG emissions from the air transport sector, dropping slightly from 230 thousand tonnes in 2008 to 225 thousand tonnes a decade later. During this period Malta's aircraft register had grown steadily but was still relatively small. In the subsequent seven years, the number of registered aircraft more than tripled. The sector's emissions increased by more than twenty times, reflecting the fact that most of the newly registered aircraft were relatively large and formed part of airlines with quite intensive use, notably low-cost airlines.

Rather than remove all the GHG emissions of the air transport sector, like the Climate Action Authority (2026) does<sup>10</sup>, it is best to try to extract those emissions which occurred in Malta's airspace. Looking at 2024, it transpires that only 4.38% of the total number of flights performed by Maltese-flagged aircraft were in Malta's airspace. There were 17,560 departures and 17,624 arrivals within Malta's airspace. Adopting the same methodology as Sant (2025) to estimate their emissions, one can estimate that only 4.07% of total GHG emissions reported for the air transport sector were related to flights connected to Malta. This implies that instead of 4,730 thousand tonnes, GHG emissions for air transport services in Malta should be 194 thousand tonnes, thus continuing the trend decline observed in this sector. Using this methodology, one arrives at an overall GHG emissions total which is very similar to that computed using the UN methodology.

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<sup>10</sup> The figures related to the CAA factsheet release can be visualised on its website; <https://climateaction.gov.mt/wp-content/uploads/2026/02/FACTSHEET-AEA.pdf>

**Figure 3: Emissions Intensity Under Different Methodologies**



*Source: Author's estimates using Eurostat, United Nations and National Statistics Office data  
Notes: Green House Gasses (GHG) per euro of economic activity*

Figure 3 shows the Maltese economy's emissions intensity using different methodologies to compute the size of GHG emissions. Between 2005 and 2020 the trend is similar, with a decline of 60% under the Eurostat methodology and 66% under the UN approach. Subsequently the situation changes drastically, with the Eurostat data suggesting a reversal of trend while the approach that ignores the emissions of Maltese-registered aircraft operating outside Malta's airspace suggests that the decline in emissions intensity continued to accelerate. The latter approach indicates that by 2024, Malta's emissions intensity was just over a quarter of what it had been in 2005.

This, of course, does not necessarily mean that Malta is satisfying all the commitments that it has undertaken internationally. Besides a general decline in GHG emissions, the country is committed to reduce emissions in particular sectors. In this regard, European Commission (2025b) noted that "prior to any use of ESR flexibilities by Member States to meet their targets, Germany, Ireland and Malta show the largest projected gaps in 2030". Yet this statement is strictly in respect of effort sharing regulation sectors, namely domestic transport (excluding aviation), agriculture, waste, buildings and small industry. Here again local media articles erroneously interpreted this to mean that "Malta only EU country to emit more greenhouse gases in 2030 than 2005: Malta's greenhouse gases could rise 30% above 2005 levels".<sup>11</sup>

Unfortunately, interpretation of climate action targets and indicators is still very superficial in Malta, and policymakers need to do much more to ensure that stakeholders and especially the media are better informed and, thus, better able to explain developments to the public. Public misinformation is highly detrimental to effective climate action. If the public is misguided into thinking that policy measures are not having the desired effect, this could increase resistance to emissions-reducing policies as the public will underestimate how effective policies are. Misinformation could also encourage climate emergency

<sup>11</sup> <https://timesofmalta.com/article/malta-set-eu-country-emit-2030-2005-report.1119501>

deniers to push for the cessation of climate action policies, arguing that they cause economic pain with no gain for the environment.

## 4. Conclusion

In recent years, the Maltese economy and the population on the islands have grown very strongly. These factors by themselves could have led to considerable increases in GHG emissions, resulting in a substantial deterioration in Malta's air quality. Yet substantial investments in the energy sector together with other reforms, such as incentives for the public to invest more in solar panels and to purchase non-fossil fuel vehicles, have helped to address this. The adoption of energy-saving technologies and green investment by many private operators has also contributed. However, a key driver of lower emissions intensity was the shift of the Maltese economy towards high valued services, especially digital sectors such as gaming and computer programming. This has meant that the emissions generated by additional economic activity in Malta has effectively shrunk to a quarter of what it had been two decades earlier.

Statistical definitions are giving rise to significant confusion about Malta's progress towards carbon neutrality, meaning that policymakers have a more onerous duty to explain more the indicators and targets applied in this area. Understanding progress is crucial if stakeholders are to make the necessary changes to economic behaviour needed for Malta to satisfy all its international commitments. Sensationalism in this area is unnecessary, and could hurt Malta's business environment, in turn making the achievement of climate neutrality even more of a challenge. In a world where ESG concerns are becoming ever more considered by investors, public communications about Malta's progress warrant responsibility and as a consequence need to be evidence-based and more considerate.

## References

Climate Action Authority (2026), An analysis of Malta's GHG emissions by economic activity, Available at: <https://climateaction.gov.mt/wp-content/uploads/2026/02/FACTSHEET-AEA.pdf>

European Commission (2025a), 2025 Country Report – Malta, Commission Staff Working Document, Available at: [https://economy-finance.ec.europa.eu/document/download/be493fbf-cb70-432c-a68a-13067176ff38\\_en?filename=MT\\_CR\\_SWD\\_2025\\_218\\_1\\_EN\\_autre\\_document\\_travail\\_service\\_part1\\_v5.pdf](https://economy-finance.ec.europa.eu/document/download/be493fbf-cb70-432c-a68a-13067176ff38_en?filename=MT_CR_SWD_2025_218_1_EN_autre_document_travail_service_part1_v5.pdf)

European Commission (2025b), Climate Action Progress Report 2025, Available at: [https://climate.ec.europa.eu/eu-action/climate-strategies-targets/progress-climate-action/eu-climate-action-progress-report-2025\\_en](https://climate.ec.europa.eu/eu-action/climate-strategies-targets/progress-climate-action/eu-climate-action-progress-report-2025_en)

European Parliament and The Council of the European Union (2023), Regulation (EU) 2023/857 of the European Parliament and of the Council of 19 April 2023 amending Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement, and Regulation (EU) 2018/1999. Available at: <https://eur-lex.europa.eu/legal-content/EN/RXT/?url=CELEX:32023R0857>

Eurostat (2025), Greenhouse gas emission accounts, Statistics Explained, Available at: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Greenhouse\\_gas\\_emission\\_accounts](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Greenhouse_gas_emission_accounts)

Government of Malta (2025), Malta Vision 2050, Public Consultation Document, Available at: <https://economy.gov.mt/wp-content/uploads/2025/04/Malta-Vision-2050-Public-Consultation.pdf>

Rapa, N. (2017), The macroeconomic effects of efficiency gains in electricity production in Malta, Central Bank of Malta Policy Note, August 2017.

Sant, K. (2025), The Maltese aircraft registry in focus: Global reach and carbon footprint, Central Bank of Malta Discussion Paper DP/06/2025.