BirdLife Malta feedback to First Update of Malta's National Air Pollution Control Programme

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Introduction

BirdLife Malta welcomes the 'First Update of Malta's National Air Pollution Control Programme' (NAPCP). In particular, BirdLife Malta wishes to focus on the shipping sector, given its ongoing participation in a network of NGOs addressing air pollution from ships[1].

Shipping emissions are a major contributor to global air pollution. The continued use of polluting fossil fuels, particularly heavy fuel oil, results in the release of harmful pollutants such as sulphur oxides (SOx), nitrogen oxides (NOx), and (ultra-)fine particulate matter (PM). These pollutants pose serious risks to human health, the environment, and the climate, contributing to acid rain, smog, respiratory illnesses, cardiovascular diseases, and other adverse health impacts, particularly in coastal and port communities.

Ship emissions are initially dispersed at chimney height and may travel several hundred metres before settling at ground level. The affected areas vary depending on wind direction and weather conditions, meaning that the impacts of shipping emissions extend beyond immediate port areas and can affect multiple communities.

Decarbonising Maritime Transport

Electrification efforts should not be limited solely to road transport but should also extend to ferry services operating around the Maltese islands. While efforts are being made to increase ferry connectivity from strategic locations, it is disappointing that stronger measures are not being proposed to electrify these services.

If Malta aims to promote a shift away from private vehicle use and encourage greener forms of transport, it would be both coherent and appropriate for these ferry services to operate using electric propulsion or low-carbon marine fuels such as green ammonia or methanol. Electrified ferry services would significantly reduce greenhouse gas

[1] https://en.nabu.de/topics/traffic/eca/index.html

emissions, noise pollution, and air pollution in coastal and harbour areas, while also demonstrating leadership in sustainable maritime transport.

In this regard, the proposal to upgrade a single Gozo Channel vessel is not sufficiently ambitious, particularly in light of the earlier statement that Gozo Channel ferries and fast ferries operating between the main islands account for 15.5% of total NOx emissions.

Strengthening the Use of On-Shore Power Supply (OPS)

While shore-side electricity infrastructure has been implemented, the actual utilisation of this facility remains very limited. At present, only a small number of cruise ships possess the necessary onboard technology to connect to shore-side electricity systems. Consequently, only a limited number of cruise ship calls have made use of this infrastructure.

Through BirdLife Malta's involvement in projects supporting the decarbonisation of the shipping sector, as well as its ongoing engagement with the port residents' network, residents have consistently reported that the majority of cruise ships continue to operate their engines while berthed. This continues to have a significant adverse impact on local air quality and the quality of life of nearby residents. Emissions from shipping, including sulphur oxides, nitrogen oxides and ultra-fine particulate matter, pose significant risks to human health and contribute to environmental problems such as acid rain and smog, particularly in coastal and port communities.

Given the continued severity of shipping-related air pollution, BirdLife Malta calls for stronger and more immediate measures to address this issue. In particular, the use of on-shore power supply (OPS) should be expanded and, where feasible, made mandatory. Where necessary, Malta should encourage a transition towards cruise operators equipped with the technology required to utilise OPS.

The NAPCP should also discourage the further expansion of cruise activity and passenger volumes. The cruise industry has well-documented climate and environmental impacts, and additional local expansion would undermine the objectives of the NAPCP.

The situation is particularly critical in localities surrounding the Grand Harbour. According to a recent journalistic investigation, the number of hours spent by cargo ships at the Palumbo shipyard has increased significantly over recent years. Ships operating auxiliary engines while berthed contribute substantially to emissions of SO_2, NOx and particulate matter, all of which are linked to cardiovascular disease,

respiratory illness and cancer. Cruise liner traffic has also increased rapidly since 2019, with up to four cruise ships calling at Valletta on a single day, placing considerable additional pressure on local air quality[2].

Improving Air Quality Monitoring

While we acknowledge that five near real-time monitoring stations have been maintained across Malta, we emphasise the importance of establishing and maintaining a comprehensive air quality monitoring network that adequately represents all areas heavily affected by pollution.

In this regard, it is concerning that no monitoring station has been established in downwind communities heavily affected by shipping emissions, including Bormla and Isla. This omission significantly limits the ability to assess the true impacts of shipping-related pollution on these communities.

Air quality monitoring networks are an essential tool for assessing pollution levels, identifying pollution hotspots, and tracking progress over time. Monitoring should also capture both spatial and temporal variations in pollutant concentrations, recognising that pollution levels can vary considerably throughout the day and across seasons[3]. Furthermore, monitoring should include both ambient air quality and emissions from land-based and offshore point sources.

Identifying pollution hotspots and major emission sources is essential for developing targeted air quality measures. Monitoring stations should also comply with the requirements of the Ambient Air Quality Directive, including the prescribed micrositing criteria. We therefore recommend that the existing monitoring network be reviewed to ensure that station locations and designs fully comply with the Directive.

The location and micrositing of monitoring stations - such as whether they are situated in open spaces or within street canyons - have a significant influence on the accuracy and representativeness of the data collected. A permanent monitoring station should now be established urgently to assess pollution levels arising from shipping activity and their impacts on downwind communities, including Isla and Bormla.

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[2] https://lovinmalta.com/opinion/analysis/revealed-open-source-data-shows-increase-in-palumbo-shipyard-traffic-after-rushed-secretive-merger-with-msc-cruises/

[3] World Health Organization. (2021). WHO global air quality guidelines: particulate matter (PM2. 5 and PM10), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide. World Health Organization.

Preventing the Transfer of Air Pollution to the Marine Environment

With the introduction of the Mediterranean Sulphur Emission Control Area (SECA), it is expected that more commercial vessels and cruise ships will utilise exhaust gas cleaning systems (EGCS) to comply with the new sulphur limits. Experience from other regions suggests that a significant proportion of vessels will install scrubbers while continuing to use high-sulphur fuels.

Currently, scrubber wash water discharges are not prohibited in Maltese waters, nor have adequate assessments been undertaken to determine the environmental impacts of these discharges. Scrubber wash water contains contaminants including polycyclic aromatic hydrocarbons (PAHs), heavy metals, nitrogen compounds and sulphur compounds. In effect, scrubber technologies transfer pollution from the atmosphere into the marine environment, where they contribute to ecotoxicity, bioaccumulation, acidification and eutrophication[4,5].

The redirection of air pollution into the marine environment should therefore be explicitly avoided and recognised as an objective within the NAPCP. Malta should prohibit scrubber wash water discharges within waters under its jurisdiction, including open-loop discharges and bleed-off water from closed-loop systems. Where closed-loop scrubbers are used, they should operate in zero-discharge mode, with appropriate onshore reception facilities available for the disposal of sludge and wastewater. As a leading flag state, Malta should demonstrate leadership by prohibiting scrubber wash water discharges within its territorial waters[6].

Supporting International Measures to Reduce Shipping Emissions

While acknowledging that this is a national programme, BirdLife Malta believes Malta should actively support the adoption of the International Maritime Organization's (IMO) Net-Zero Framework and the establishment of a Mediterranean Nitrogen Emission Control Area (NECA), through Malta's delegation at the IMO. Supporting these initiatives would contribute not only to global greenhouse gas reductions but also to meaningful

[4] Chen, C. F., Lim, Y. C., Ju, Y. R., Albarico, F. P. J. B., Cheng, J. W., Chen, C. W., & Dong, C. D. (2022). Method development for low-concentration PAHs analysis in seawater to evaluate the impact of ship scrubber washwater effluents. Water, 14(3), 287

[5] Hassellöv, I. M. (2023). Scrubber technology: Bad news for the marine environment. Regulation of risk: Transport, trade and environment in perspective, 353-368.

[6] Osipova, L. I. U. D. M. I. L. A., Georgeff, E. L. I. S. E., & Comer, B. R. Y. A. N. (2021). Global scrubber washwater discharges under IMO's 2020 fuel sulfur limit. Int. Counc. Clean Transp, 10-12.

improvements in local air quality, given Malta's strategic importance as a Mediterranean shipping hub.

The IMO Net-Zero Framework seeks to decarbonise international shipping and achieve net-zero greenhouse gas emissions by or around 2050. The framework is expected to become part of MARPOL Annex VI and would primarily apply to oceangoing vessels exceeding 5,000 gross tonnage (GT).

This is particularly relevant given Malta's rapidly increasing maritime activity. In 2023, Malta recorded 45,949 port calls compared to 22,882 in 2012, effectively doubling within just over a decade. Compared with 2022, Malta also registered the fourth-largest increase in port calls within the European Union[7].

The Malta Freeport is predominantly served by cargo vessels, while Valletta Cruise Port accommodates large cruise liners. The vast majority of these vessels fall within the scope of the IMO Net-Zero Framework.

Malta should also fully support the establishment of a Mediterranean NECA, which represents the logical next step towards achieving the objectives of the Ambient Air Quality Directive. This is particularly important given that shipping accounts for 26.2% of Malta's NOx emissions. We therefore urge the competent authorities to advocate for the adoption of a Mediterranean NECA through Malta's delegation at the IMO.

Given Malta's strategic location and the scale of maritime activity around the islands, BirdLife Malta believes the Government should actively support ambitious international measures aimed at reducing shipping emissions and improving air quality for present and future generations.

Conclusion

BirdLife Malta urges the Government to strengthen the National Air Pollution Control Programme by adopting more ambitious measures to address emissions from the shipping sector. This includes accelerating the decarbonisation of maritime transport, expanding and enforcing the use of on-shore power supply, strengthening air quality monitoring in affected communities, prohibiting scrubber wash water discharges, and supporting international initiatives such as the IMO Net-Zero Framework and a Mediterranean NECA. Given Malta's strategic maritime position, decisive action is essential to protect public health, improve air quality, safeguard the marine environment, and support the transition towards a more sustainable shipping sector.

[7] https://timesofmalta.com/article/vessel-entries-malta-double-10-years.1104565