

# **Dublin Port**

## **Cruise Consultation**

## Contents:

1. Environmental Impacts
  - 1.1 Fuel Impacts on Marine Environments
  - 1.2 Improper Waste Disposal
  - 1.3 Air Pollution and Dublin
2. Financial and Cultural Impacts
3. Conclusions

## 1. Environmental Impacts

### 1.1 Shipping Fuel and the Marine Environment

Cruise ships are often described as floating cities and move thousands of people at a time. However they also use the equivalent resources and produce the waste of a city and require huge quantities of fuel to achieve this feat. Most ships, not just cruise ships, use “bunker fuel” which burns far dirtier than standard vehicle fuels such as petrol. Bunker fuel is a type of liquid fuel which is fractionally distilled from crude oil and this material can be broken down into different categories based on its chemical composition, intended purpose, and boiling temperature. In comparison with other petroleum products, bunker fuel is extremely crude and highly polluting. Vast quantities of fuel are required to move the immense mass of a cruise ship, with commensurately huge emissions of CO<sub>2</sub> as well as nitrogen and sulfur oxides. If this fuel leaks it is extremely difficult to clean up and it coats birds and shorelines very effectively, because it's so dense. Because it also carries a range of contaminants, it can represent a serious environmental hazard when it spills.

The possibility of fuel leakage is one of many issues around marine pollution and shipping and is a key reason to resist the Dublin Port expansion to accommodate larger cruise liners. In the last number of years cruise liners have repeatedly been recorded dumping oil waste into marine environments in flagrant breach of international law. While thousands of ships have fitted scrubbers to address the worst of fuel pollution to water these are effectively ‘cheat’ devices moving pollutants from air exhausts to water based emittance. Despite new regulations in 2020 the shipping industry has a poor record of compliance. Princess Cruise Lines recently plead guilty to seven felony charges stemming from its deliberate pollution of the seas and intentional acts to cover it up. Princess will pay a \$40 million penalty– the largest-ever criminal penalty involving deliberate vessel pollution – and plead guilty to charges related to illegal dumping of oil contaminated waste from the *Caribbean Princess* cruise ship

## **1.2 Improper Waste Disposal**

Fuel waste and exhaust pollutants are not the only waste product produced by cruise liners. In 2019 Carnival Corporation was ordered to pay \$20 million to a US court after Princess Cruises, a Carnival subsidiary, admitted to violating the terms of its probation from a 2017 conviction for improper waste disposal. The case demonstrated repeated and excessive violations of proper waste management on ships that deal with huge quantities of food and human waste every day. A court filing submitted stated that Carnival released food waste and plastic into the ocean, failed to accurately record waste disposals, created false training records, and secretly examined ships to fix environmental-compliance issues before third-party inspections without reporting its findings to the inspectors. The US EPA estimates that a 3000 person cruise liner generates just under 800,000 litres of sewage weekly. In 2014 cruise ships dumped more than 1 billion gallons of untreated sewage into the ocean.

There are a number of protected areas around Dublin Bay including the Biosphere area around Bull Island which is recognised by UNESCO as 'one of the finest sand dune systems in Ireland and is internationally important in terms of its conservation value. There are high quality examples of several rare and threatened coastal habitats present on the island. The biosphere reserve is significant from a conservation perspective since it supports well-developed salt marshes and dune systems displaying all stages of development from the earliest phase of colonization to stable and full maturity. The area is also important for nesting and wintering waterfowls. Any breeches in waste disposal protocol by cruise liners could decimate the Dublin Bay marine environment.

## **1.3 Air Pollution and Dublin**

As cited above the fuel used in shipping is crude and highly polluting. The hydrocarbon chains in bunker fuel are very long, and the fuel is highly viscous as a result. It is also heavily contaminated with various substances which cannot be removed, so when it is burned, it pollutes heavily. From the 1<sup>st</sup> of January 2020, ships will only be allowed to use fuel oil with a lower sulphur content, under rules brought in by the International Maritime Organisation. As stated previously while thousands of ships have fitted scrubbers to address the worst of fuel pollution these are effectively

'cheat' devices. The scrubbers allow ship owners to continue buying cheaper high-sulphur fuel, which is washed onboard in the scrubber. In the case of the most used system, known as open loop, the waste water is discharged into the ocean.

Dublin currently has a growing issue in dealing with air quality and levels of contamination. The current rate of deaths attributable to air pollution is considered to be underestimated at 1200 people every year. Following the restriction of car access in Oslo their vice mayor for urban development Hanna Elise Marcussen compared the idea of bringing polluting vehicles into the city centre as similar to our view on smoking indoors a few decades ago and suggested we would soon wonder why we ever considered that something with such a negative public health impact was acceptable. In 2019 a startling piece of research published by the Environmental Protection Agency outlined that pollutants in the air we breathe were in breach of EU safety standards and at dangerous levels in the inner city, at Pearse Street and at transport interchanges such as the Port Tunnel, the M50 and Heuston Station. In the face of such evidence it seems foolhardy to facilitate the introduction of heavily polluting cruise ships into a city already struggling with this issue.

A piece of research carried out by the sustainable transport group Transport and Environment revealed that Carnival Corporation, the world's largest luxury cruise operator, emitted nearly 10 times more sulphur oxide (SOX) around European coasts than did all 260 million European cars in 2017. NOX emissions from cruise ships in Europe also heavily impact some cities, equivalent to about 15% of the nitrogen oxides (NOX) emitted by Europe's passenger car fleet in a year, the report finds. In Marseille, for example, 57 cruise ships emitted in 2017 almost as much NOX as one-quarter of the city's 340,000 passenger cars. Along the coasts of countries such as Norway, Denmark, Greece, Croatia and Malta a handful of cruise ships are also responsible for more NOX than the majority of their domestic car fleet.

NOX emissions and particulate matter in highly polluting fuels are an aggravating factor in asthma. Ireland has the fourth highest rate of asthma in the world with a particularly high instance in children that live in or around the Dublin area. Up to 470,000 individuals in Ireland have the condition.

There has been a very considerable increase in asthma prevalence in developed countries over the last two decades. While asthma tends to run in families, the reason for the increase is not genetic. It is more likely environmental - either due to a great change in the external environment over this period (allergic substances, pollution, smoking) or a change in our bodies' response to the external environment. While the prevalence of asthma was in decline in some countries, new figures show 72 people a year were dying in Ireland as a result of the condition. The World Health Organisation has described air pollution as the 'single biggest environmental health risk'. It is worth noting that Naturschutzbund Deutschland (NABU), a German environmental association recently warned that while cruise liners are increasing pollution to inhabitants of visited cities guests on board a cruise ship could be inhaling "60 times higher concentrations of harmful air pollutants " than they would in natural air settings.

## **2. Financial and Cultural Impacts**

On the basis of public health alone it is advisable that no further accommodation of cruise ships in the Dublin area should be made and that into the future current usage should be phased out. However if the proposal was to succeed it should be noted that the current financial proposal does not include a budget to fund a terminal for cruise ships or to significantly upgrade capacity in existing infrastructure in this regard. Terminals in similar European locations over the last 5 years have cost between 23 and 50 million euro and this cost should be factored into the proposal.

A number of studies have considered the economic impact of cruise liners on the cities they visit and whether the financial boost is beneficial considering the environmental and health costs. A

recent study, *Economic Contribution of Cruise Tourism to the Destination Economies*, measured how much passengers spend when a cruise ship docks in a town. The passengers, almost exclusively, have paid for an all inclusive package which provides free food on board- they mostly don't eat out in the town's restaurants. A significant number don't disembark from the ship during its docking. Of those who do come ashore, most board a tour bus to visit the major national attractions: the Book of Kells, Glendalough, the Guinness Brewery. Those who walk around the town, may buy small gifts or mementoes. The experience of destinations cities for cruise liners has mostly been that they experience a sudden increase of cruise passengers with in a short time frame (sometimes less than a day stay) and that the nature of their purchases leads to a proliferation of souvenirs shops and low-price-and-quality restaurants. Businesses such as this, targeting day (or hour) trippers, in fact contribute to the increase of rents and the disappearing of many local shops and activities, as well as artisans' shops and authentic traditions.

### **3. Conclusion**

Carbon from shipping makes up about 3% of global total carbon emissions, but is expected to rise to 17% by mid-century. In 2018 Ireland exceeded its annual greenhouse gas emissions allocation by more than five million tonnes. Ireland has pledged to reduce emissions to 20 per cent below 2005 levels by next year but figures from the Environmental Protection Agency (EPA) show it is set to exceed its target by a significant percentage. The State will face substantial recurring penalties in 2020 for non-compliance on emissions and based on current trends, there is no indication when emissions key sectors will deliver the required reductions. Emissions from shipping are not included in national indicators however the impact of pollution and negative impacts on water and air quality will have a direct impact on the inhabitants of Dublin and in turn on our city's infrastructure, including our health service.