Impacts of Poor Air Quality

According to the World Health Organisation (2019 (1)), air pollution is known to be a major cause in death and diseases around the world. The different effects that it may have on your health may differ from admissions into hospitals and emergency rooms increasing to possible risks of premature deaths.
There has been an estimated amount of premature deaths around the world—of 4.2 million people being linked to air pollution due to suffering from: -

- *'heart disease,*
- *stroke,*
- *Chronic obstructive pulmonary disease,*
- *Lung cancer, and*
- *Acute raspatory infections in children.'*

Due to the fine particulates within the polluted air penetrating the lungs and the cardiovascular system (WHO (1), 2019).

The World Health Organisation ((1) 2019) have also noted that air pollution is the cause of: -

- *'29% of all deaths and disease from lung cancer*
- *17% of all deaths and disease from acute lower respiratory infection*
- *24% of all deaths from stroke*
- *25% of all deaths and disease from ischaemic heart disease*
- *43% of all deaths and disease from chronic obstructive pulmonary disease'.*

In the national statistics of the UK from 1987 to 2018, released in April 2019, the Department of Environment, Food and Rural Affairs (DEFRA) claim that the roadside particulate pollution matter (PM_{10}) has improved over the long-term with stable observations from 2015 to 2018 for both the roadside and the urban environments.

Whilst Nitrogen dioxide levels (NO_2) in both roadside and urban environments has shown improvements over the long-term in 2018, the levels of NO_2 tend to peak during the rush hours and the weekends by the roadsides, where the concentrations are 20% higher on weekdays compared to the weekends. Another problem for pollution on the roadsides is ozone (DEFRA (1), 2019).

According to DEFRA (1) in April of 2019, ozone has been stable between 2003 and 2018, however since DEFRA began their monitoring ozone has been steadily increasing in levels. Levels can vary by the roadside and the urban environments from year to year, depending on factors such as the weather, where the hot summer of 2018 saw levels at either a moderate or higher ozone pollution.

Being exposed to PM_{10} and $PM_{2.5}$ both in the long and short-term could contribute to a heightened risk of developing cardiovascular diseases as well as respiratory diseases. Ozone (O_3) gas can affect your health, high levels of exposure would affect you adversely if you have breathing problems such as: -

'triggering your asthma, reducing lung function, and cause lung diseases' (DEFRA (1), 2019).

AIR POLLUTION

(Telegraph Reporters, 2018)

The quality of the air you breathe and the impact of poor air on health, society and the environment.

What Is Air Pollution?

Air pollution is made up of many pollutants in the air which can be harmful to humans. The more damaging types of air pollution are recognised as particular matter, nitrogen dioxide and ozone (British Lung Foundation (1), 2017)

Pollution affects the UK differently in various areas due to the differing levels of pollution. The severest levels of pollution concentrate can be detected in towns and cities. Air pollution can change during the seasons and owing to the weather (British Lung Foundation (2), 2017).

Air pollution cover vast areas and can travel far from where it was generated — this could mean that the pollution could have been sourced from outside of the UK. Particular matter and nitrogen dioxide are generated by both diesel and petrol vehicles, with diesel vehicles more widely regarded as air pollutants. Particular matter could equally be caused by the friction of the brakes and tyres.

Other notable sources of air pollution are from the use of burning fuels in houses for heating water or cooking meals, agriculture and emissions for generation power and processes of the industrial side of work (British Lung Foundation (3), 2017).

The world is becoming overcrowded and the climates temperature is rising, we continue to release dirty emission fuels from our vehicles and industrial work. The air that we currently breath is becoming alarmingly more toxic due to pollution. Half of the world can't even get access to a cleaner fuel or technology such as stoves and lamps (World Health Organisation (3), 2019).

In May (2018), the WHO had new data that showed statistics of 9 out of 10 people globally are breathing in polluted air. This new data also estimated numbers that included the fatal amount of people dying roughly 7 million a year being caused by the ambient air pollution.

Policy in the UK for Air Quality

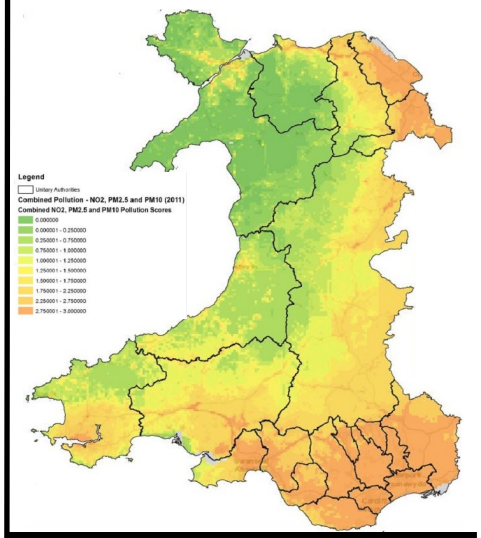
The UK and Wales have had policy strategies released in the past. The UK introduced a strategy on air pollution — named The Environment Act 1995 – which established the skeleton of management areas of Air Quality, and the Clean Air Act of 1993. The Clean Air Act was created for the government in hoping to protect the public and their health from the smoke emissions (National Assembly for Wales, 2018).

In Wales, there is the Air Quality Standards (Wales) Regulations 2010, this strategy brings a limit set out to follow the EU directives within the air quality strategies. And the Air Quality (Wales) Regulations 2000, was modified by the Air Quality Strategy (Wales), due to the regulations brought in by the EU directives (National Assembly for Wales, 2018).

The Clean Air Strategy (2019), was put into place to start a case for action by the Governments — Department of Environmental, food & Rural Affairs to determine that we improve our air quality. For some instances their ambitions are even greater than that of the EU's requirements, due to wanting to do anything that we as a nation can do to reduce people's exposure to the toxic pollutants that we breath in (as stated in the section above).

This strategy shows how we should tackle air pollution and how we should make our air to be cleaner and healthier to breath while protecting our nature. Clean air is an important aspect to have in our lives and health as well as for the environment and the economy (DEFRA (2), 2019).

Air Pollution in Wales



(Snowdonia National Park, 2016)

Air quality can affect your health over both long and short term. For the air quality to affect us it may depend on where we live, work and visit as a side effect of the local economy and community. Standards of good air quality has been produced by the World Health Organisation (WHO) and have been adopted by the European Commission and subsequently the UK, who all agree how important air pollution is and the negative effect it can have on people (Neath Port Talbot County Borough Council, 2013).

AirWise is a project by the Neath Port Talbot County Borough Council, originally written in 2000, but revisited and updated in 2013 (Neath Port Talbot County Borough Council, 2013).

The publication states that we all have a right to breathe fresh clean air. Their aims for the long-term and their strategies include:

- *'To ensure air quality in Neath Port Talbot allows residents and visitors to enjoy time outdoors without risk to their health*
- *To ensure air quality throughout the County Borough is better than the standards required by EU and UK legislation.*
- *To achieve consistently good air quality in Port Talbot so that we can revoke the Air Quality Management Area status by compliance with LAQM air quality objectives.*
- *To better inform the public on issues relating to air quality To reduce nuisance dust and thereby improve quality of life'* (Neath Port Talbot County Borough Council, 2013).

This strategy has its limitations by relying on collaborations and partnerships between Government, Regulators, Public Health as well as the Public and Industry (Neath Port Talbot County Borough Council, 2013).

Rational

Air Pollution was chosen for this assignment because it is a relevant contemporary issue in today's news and to the public's health, in not only the UK but also to people all around the world (The Economic Times, 2017).

The leaflet is designed with having black backgrounds with white writing to show the separate sections of the as well as to capture the general audience within Wales about the serious topic that is air pollution. The pictures used in the leaflet show how bad air pollution is. The fist picture on the cover is of the Tata Steel works in Neath Port Talbot, South Wales — the styles of the picture, where the buildings are a black silhouette with the sun in the background giving a yellow hue behind the smog being released by the chimneys. The second picture is an indicator of the levels of pollution in Wales — the map shows that the worst areas in Wales are along the South and North East along the M4 and the A483 near Wrexham and the A41 near Whitchurch in England just across the border.

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