

# Response to the Climate Change Adaptation Plan for the Health Sector

## Introduction

The Academy welcomes the publication of the Public Consultation document on the *Climate Change Adaptation Plan for the Health Sector* and commends the Department of Health for its work on this. We are pleased to make a submission as part of this process.

There have been three recent publications regarding the impact of climate change on health in Europe (World Health Organization (WHO) 2017, 2018; Watts et al. 2018; European Academies' Science Advisory Council (EASAC) 2019), with the Royal Irish Academy contributing to the latter report. These publications confirm that climate change is happening and that it is already affecting the health of the European population. They also highlight that the population “at risk” or most vulnerable to climate change is increasing in Europe due to the ageing population.

Taking guidance from the EASAC report in particular, which recommends that “Health” needs to be included within all policies, and particularly in respect of any climate change actions being considered, we note that this aspect is included as a possible adaptation action and we recommend that it is essential. For example, in the UK, well intentioned plans to ensure energy efficient buildings has led to some office blocks being too warm in summer, and thus giving rise to poor indoor air quality as an unintended consequence. So, having “health”, or the “impact on health”, incorporated into all climate change policies might help avert similar unintended consequences.

## Six climate scenarios with profound health implications

### *UV exposure*

We welcome the inclusion of this as a key risk area, and the suggested adaptation actions are appropriate, in particular, the targeted education campaigns.

### *Air pollution*

It is suggested that this section might be better called ‘Air quality’. The real challenge in respect of air quality is to reduce emissions, especially from fossil fuel burning. This would also achieve reductions in the greenhouse gas emissions as well. People must breathe the air where they live and work, there is little scope for people to move, and thus the key challenge is to remove sources of air pollution.

It is welcomed that ozone exposure is recognised, as this is likely to increase with more UV exposure in summertime. It is recommended that Ozone exposure in rural areas needs more attention and research.

One area which warrants consideration, however, is forest fires and gorse fires and also the burning of stubble as these all contribute to poor air quality and pose a health hazard. It is noted that as the climate is changing with drier spells of weather that there has been an increase in forest and gorse fires here in Ireland and across Europe as a whole. In addition to the direct impacts on human health of both ozone and pollution from forest fires etc., these also have broader environmental impacts in the local eco-systems.

Indoor air quality is another challenge, as many people, particularly the elderly, spend a lot of time indoors. Any government policy to improve the energy efficiency of buildings (dwellings and workplaces) needs to ensure proper indoor air quality.

### **Windstorms**

We understand these to be severe storms (mostly in winter), and in particular, those attracting a “red” status warning from Met Éireann. The frequency of such storms appears to be increasing. Normally the advice with these is to stay indoors. However, these storms pose a risk to a disruption of both power supplies and communications and transport links.

Appropriate plans need to be in place to ensure that people needing dialysis and other home medical services are properly planned for. It is suggested that a risk analysis and contingencies be put in place for all nursing homes and crèches/preschools to ensure adequate plans are in place should power supplies fail or should transport links be blocked.

Appropriate advice needs to be given in a timely manner, especially since power and communication systems might fail. This is where cross disciplinary approaches are needed. These severe storms are also frequently associated with significant amounts of rainfall and flooding.

### **Heat / heatwaves**

In both hot weather and cold weather, it's normally those with existing chronic conditions who are most at risk. Typically, the elderly and the very young, and those with cardiovascular conditions and respiratory conditions are most at risk. Furthermore, evidence shows that diabetics, whose numbers are rising rapidly in Ireland, are a group at particular risk. Further evidence is emerging (EASAC 2019) that the incidence of kidney stones increases during spells of hot weather, most likely due to a lack of fluid intake. Evidence from the 2003 heatwave in France, for example, showed most people who died were at home and not in health facilities.

Appropriate advice and appropriate communication strategies need to be available. Putting information on a website will not reach many of the elderly population i.e. those who most need to be targeted. Additional

research is needed to properly identify at what points warnings need to be issued. We welcome the plan to develop a “Summer Ready Plan” however such a plan needs to be built on scientific evidence and research.

### *High precipitation / flooding*

Certain areas are already being affected by flooding and the threats to coastal areas and along certain rivers is increasing. Apart from the immediate risks of flooding, they can impose severe financial hardship and result in job losses. These are associated with significant effects on mental health which can continue long after the flooding subsides. There needs to be appropriate support systems in place for those suffering from mental health issues during and after flooding events.

The issue of water contamination and increased infectious diseases associated with flooding is a real risk, and again proper monitoring is needed and appropriate communications and advice to the public. We would suggest that drought conditions also need to be considered, as these too can lead to contamination of water supplies which are particularly scarce at times of drought.

### *Cold snaps*

The discussion document quite rightly recognises that Ireland has the highest excess winter mortality in Europe and high winter morbidity. Some of this, but not all, is associated with influenza outbreaks, but these large seasonal peaks are observed even when there is no influenza. Most deaths and illnesses in winter are not directly associated with hypothermia, but rather it's the vulnerable groups, such as the elderly, the very young and those with pre-existing conditions who are more susceptible and those who die are normally from respiratory and cardiovascular events.

It should be noted that after the extreme weather has abated, the excess morbidity and mortality can continue (for weeks in some cases) especially so for respiratory illnesses. These need to be considered when planning for cold spells, not just the immediate response, but also the aftermath of the cold spell. While overall global temperatures are warming, it is suggested there may be less excess winter deaths, however as the population adapt to warmer temperatures, they may become more susceptible to extreme cold events.

More research into the level of adaptation of the Irish population would inform policy in this area, and again there is a need for appropriate advice to be given to the public and for appropriate communication streams most suited to those most at risk to the specific threats.

## Other areas worth considering

Research (WHO 2017, 2018; EASAC 2019) shows that conflict outside of Europe is likely to increase because of Climate Change. It is predicted that there will be significant displacement of people outside Europe, with a huge pressure for increased immigration into Europe. While Ireland is an island, we may still be required to take an increasing number of migrants fleeing climate driven conflict, drought and extreme heat. Our health systems need to forward plan for any such future population increases not covered by our normal population projections.

In addition to population increases, migrant groups may well have diseases/illnesses which are currently not experienced in Ireland, and the health care systems need to be developed to address this. The same is true for Irish people holidaying abroad as there is an increased risk of them contracting illness and returning home. Some of these illnesses may be contagious.

Again, while Ireland is an Island on the western edge of Europe, there is risk of new vector borne diseases and insects reaching our shores. Currently many parts of mainland Europe are experiencing the northward trend in “west Nile Virus”. We need to develop monitoring to detect any such incidence of new and/or increased incidence of existing vector borne diseases, e.g. Lyme disease in Ireland. Health care staff need to be trained in how to identify and diagnose any new vector borne diseases, and on appropriate treatments for same.

There is a national focus to reduce our Carbon emissions, and this is welcomed. Efforts to improve the energy efficiency of the housing stock, with improved insulation, and non-fossil fuel heating systems will help achieve this, but there is also the added benefit of reducing the exposure of vulnerable groups to cold and reducing air pollution. We recommend that such initiatives be accelerated as they will achieve multiple exposure reductions.

## References

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This submission was prepared for the Academy by Prof Pat Goodman and Prof Mike Jones MRIA. The Academy appreciatively acknowledges their continued efforts and provision of expertise on this important area. For more information on this submission please contact the Royal Irish Academy at [policy@ria.ie](mailto:policy@ria.ie)