EASAC (2019) 'The imperative of climate action to protect human health in Europe' - Relevance to Ireland

Briefing Paper 1 / 2019

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As a Member of the European Academies Science Advisory Council (EASAC), the Royal Irish Academy welcomes this latest EASAC report *The imperative of climate action to protect human health in Europe*. EASAC is the collective voice of the National Academies of Science of the European Union's (EU) member states, Norway and Switzerland, providing independent scientific advice for policy-makers in the EU's institutions, member states and Europe generally.

The EASAC report calls on European governments to accelerate their efforts to limit greenhouse gas emissions and lessen the impact of climate change on air quality. A recent estimate suggests that about 350,000 excess deaths annually in the EU can be attributed to outdoor air pollution from burning fossil fuels and a total of about 500,000 from all human-related activities.

Air pollution is a significant health risk with the elderly and sick children amongst the most vulnerable groups. Already, seven million babies in Europe are living in areas where air pollution exceeds World Health Organisation recommended limits: such exposure may affect brain development and cognitive function.

Based on current trends in greenhouse gas emissions, a global average temperature increase of over 3°C above pre-industrial levels is projected by the end of the century and rising temperatures will affect city dwellers more severely than rural dwellers.

This Briefing Paper by Prof Patrick Goodman discusses the latest EASAC report and its relevance to Ireland.

The Author

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Prof Goodman has been actively involved in research in the areas of air pollution and health, and climate and health, being involved in many studies, and authoring key papers, especially in the area of air pollution. He has been a member of the Royal Irish Academy Environmental Sciences and Climate Change committee for 10 years and represented the Academy on the EASAC Climate Change and Health Working Group. He has been an invited expert with the World Health Organization, the United States Environmental Protection Agency, and the European Union, and has contributed to many policy documents and reports.

- Patrick Goodman graduated with an Honours Degree in Experimental Physics from University College Dublin in 1984.
- He completed a research Masters in Atmospheric Physics from University College Dublin in 1985.
- He joined Met Eireann and qualified and worked as a Meteorologist in 1986.
- He returned to academia, joining Dublin Institute of Technology as a lecturer in 1989.
- He completed a PhD in the area of air pollution and health in Trinity College Dublin in 2000.
- He was elected a Fellow of the Institute of Physics in 2003 and has served in many committees of the Institute of Physics, including chairing the Environmental Physics group.
- He was a visiting academic at the Harvard School of Public Health, for various periods from 2000 to 2008.
- He obtained a Professorship from Dublin Institute of Technology in 2009

The 2019 EASAC report The imperative of climate action to protect human health in Europe, builds on the body of scientific evidence in the area of climate change and health, and compliments the recent World Health Organization (2017, 2018) and Lancet (see Watts et al. 2018) reports in this area. The EASAC report is developed to inform and guide policy makers.

Where are we at?

The key features of this report are that climate change is happening, and that it is attributable to human activity.

Climate change is affecting human health, both directly and indirectly.

Urgent action is needed to reduce Greenhouse gas emissions (GHG), many solutions are known, and understood, but these require political will to be implemented.

Climate change will affect the health of those living in the EU and will also have effects globally.

Key recommendations

- Reform of EU adaptation strategies to increase the focus on the health consequences of climate change.
- Health needs to be included in all policies: particular, health impact assessments need to be included in all adaptation and mitigation strategies.
- Development of healthy, climate-smart food systems, with corresponding modifications to the Common Agricultural Policy (CAP). Development and promotion of sustainable health diets.
- Linkage of climate change and health objectives into all EU and domestic policies.
- Policies need to be based on sound scientific evidence.

The details

Climate change is already affecting human health, and while the most pronounced effects of climate change are affecting other regions, there is already substantial evidence of the adverse health effects of climate change in Europe. The impacts of climate change on health fall into two broad categories, direct and indirect.

Direct effects of climate change on health are things like heatwaves, floods, droughts, storms, temperature changes, extreme weather and wildfires.

Indirect effects are things like changes in water supply and water quality, air quality, land use, ecological changes, and changes in vector-borne diseases (e.g. malaria).

Some groups in society are more susceptible to the effects of climate change, normally the very young and the elderly, and those with pre-existing chronic diseases.

Implications and Challenges for Ireland

Some might say "Ireland is a small country and even if we achieved zero GHC emissions it would have no effect". To solve the issues of GHC emissions and climate change, it needs everyone globally to do their bit.

Ireland has proved itself to be innovative and a leader in previous interventions, such as the plastic bag levy, the workplace smoking ban, and the Dublin coal ban. Each of these have had world-wide benefits. The challenge for Ireland is to lead by example and take similar initiatives to tackle climate change and its health effects.

Air pollution and Health

Every time we burn anything, we produce harmful air pollutants which affect those with breathing conditions and cardiovascular conditions. There is no safe level of air pollution. Ireland still uses a considerable amount of fossil fuels for home heating (see for example Sustainable Energy Authority of Ireland 2018), and these produce harmful air pollutants as well as producing GHG. If Ireland can accelerate its switch away from fossil fuels it will reduce both its air pollution and greenhouse gases, resulting in a double benefit. A similar approach needs to be taken with transport and energy production namely, a switch from fossil fuels to renewable and clean forms of energy. This will benefit the health of our citizens by reducing harmful air pollution, reduce our carbon footprint, and reduce our dependence on imported fuels.

Water

We already have challenges with water quality, especially in many rural areas. The supply of water and the quality of water can directly impact on human health, animal health, and on crops for food production. We need to manage our water resources in a sustainable fashion.

Health Systems

We need to develop appropriate warning systems and appropriate advice as to what to do when weather is likely to be harmful to human health, for example when extreme cold, or extreme heat is forecast. We need to be able to identify those groups in society who are most at risk, and tailor supports to serve them. We have seen the development of the National Emergency Coordination group and this could for example, work in conjunction with the health service to ensure Ireland's readiness for any climate related emergencies, both acute events, and more long-term changes.

We have seen the spread of vector-borne diseases moving northwards across continental Europe, but how prepared are we in Ireland for such events?

Food and food security

Ireland is alone in Europe in having agriculture as the sector emitting the most GHG, approx. 30% of GHG emissions, compared with the EU average of about 10%. This poses challenges to Ireland, partly due to the fact that it is out of line with other EU countries, and thus EU policies to reduce GHG emissions are more focussed on the transport and energy sectors. Ireland needs to develop its own strategies to reduce the emissions from the farming sector, and to farm in a more sustainable way for example, by increasing forestry, etc.

In addition, the evidence is that we all, humankind, benefit from a balanced diet. To that end we need to reduce our red meat intake as part of a healthy balanced sustainable diet.

Changes to climate will also affect crops, and again the risk of new invasive species affecting crop production.

References

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