The imperative for urgent climate action to protect health

Andy Haines
Emissions Projections for 2018

Global fossil CO₂ emissions are projected to rise by 2.7% in 2018 [range: +1.8% to +3.7%]
The global growth is driven by the underlying changes at the country level.

Source: CDIAC; Jackson et al 2018; Le Quéré et al 2018; Global Carbon Budget 2018
Regional temperatures at 1.5°C and rising risks

Temperature Increase

1 °C  2 °C  3 °C
Climate tipping points - the potential for non-linear, self reinforcing changes
Potsdam Institute for Climate Change
Climate change is a health emergency

Haines and Ebi NEJM 2019
The need for urgent action
Health co-benefits of decarbonizing the world economy—millions of deaths averted annually from reduced ambient air pollution (Lelieveld, Klingmüller Pozzer, Burnett, Haines, Ramanathan PNAS 2019)
Climate action for urban health

- Accessible, efficient public transport and active travel
- Universal access to clean low carbon energy
- Safe access to green spaces and ecosystem strategies for resilience
- Housing improvements, water and sanitation
AIMS FOR 2050

Mayor of London, draft Environment Strategy

Climate change and energy
London will be a zero carbon city – with zero emission transport network and zero carbon buildings.

Waste
London will be a zero waste city. 65% of London’s municipal waste will be recycled.

Adapting to climate change
London and Londoners will be resilient to severe weather and longer-term climate change impacts, such as flooding, heat risk and drought.

Green infrastructure
More than half of London’s area will be green, and tree canopy cover will increase by ten per cent, by 2050.

Air quality
London will have the best air quality of any major world city by 2050, going beyond the legal requirements to protect human health and minimise inequalities.

Noise
The number of people adversely affected by noise will be reduced, and more quiet and tranquil spaces will be promoted.

C neutral
50% green
Zero waste
Best air quality
Climate resilient
Low noise; tranquil spaces
Psychological and physical benefits from exposure to natural environments and tree planting

Outcomes:

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<thead>
<tr>
<th>Outcome type</th>
<th>Outcome</th>
<th>Pooled effect size (Hedges g)</th>
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<tbody>
<tr>
<td>Attention</td>
<td>Attention (4 studies)</td>
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<td>Pleasurable moods</td>
<td>Energy (5 studies)</td>
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<td>Tranquility (7 studies)*</td>
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<td>Displeasurable moods</td>
<td>Anxiety (6 studies)*</td>
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<td>Fatigue (4 studies)</td>
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<td>Sad or depressed (4 studies)</td>
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<td>Physiological outcomes</td>
<td>Systolic BP (6 studies)</td>
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<td>Diastolic BP (5 studies)</td>
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<td>Pulse (5 studies)</td>
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<td>Cortisol (4 studies)</td>
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Bowler and colleagues the Collaboration for Environmental Evidence

Sketch of an Urban Heat-Island Profile
The EAT-Lancet Commission - planetary health diet and targets for sustainable food production that can prevent 11 million premature adult deaths per year and lead to a sustainable global food system by 2050.
Towards an environmentally and socially sustainable health system

- Reduce energy use, GHG emissions (~5% total) and environmental footprint while increasing resilience.

https://sustainablehealthcare.org.uk/what-we-do
Under 2 Degrees Celsius: Fast Action Policies to Protect People and the Planet from Extreme Climate Change