

Climate and ecological emergency:

A profession's response



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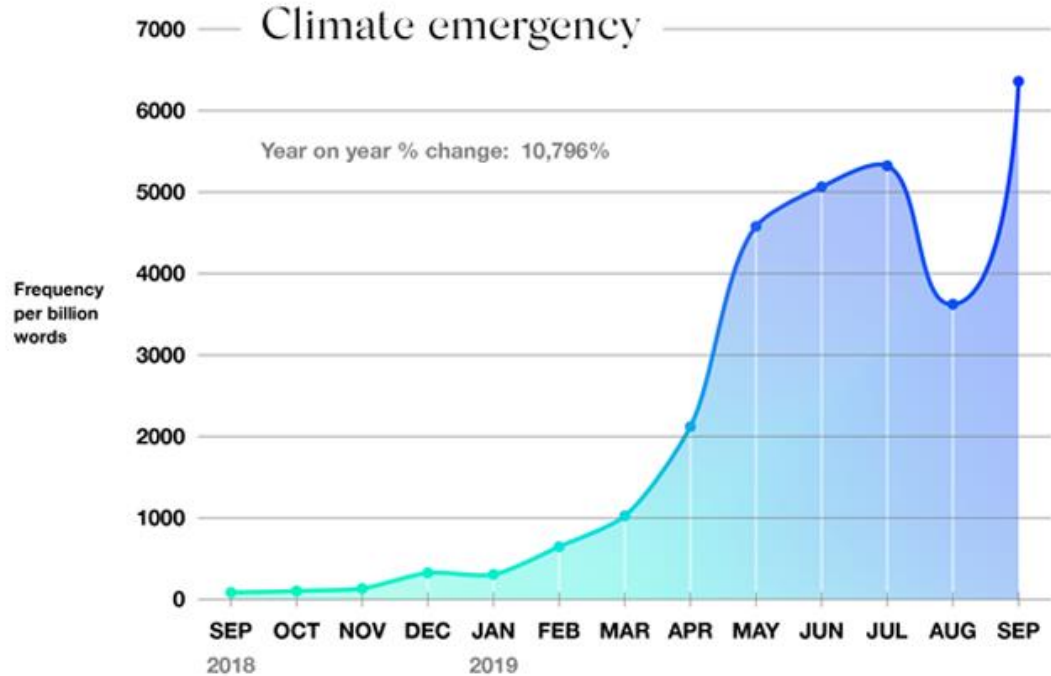
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Climate emergency

“a situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it”

Oxford English Dictionary



Source: the Oxford Corpus

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Climate emergency?

$$R \times U = p \times D \times \tau / T$$

- R = risk
- U = urgency
- Risk (R) is probability (p) x damage (D)
- Urgency (U) is time taken to react to an issue (τ) / intervention time left to avoid it (T).
- If reaction time is longer than intervention time you've lost control!
- For 2°C reaction time = 20 years, intervention time = 30 years
- For 1.5°C?

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Climate Emergency?

“a sudden, urgent, usually unexpected occurrence or occasion requiring immediate action.”

Oxford English Dictionary

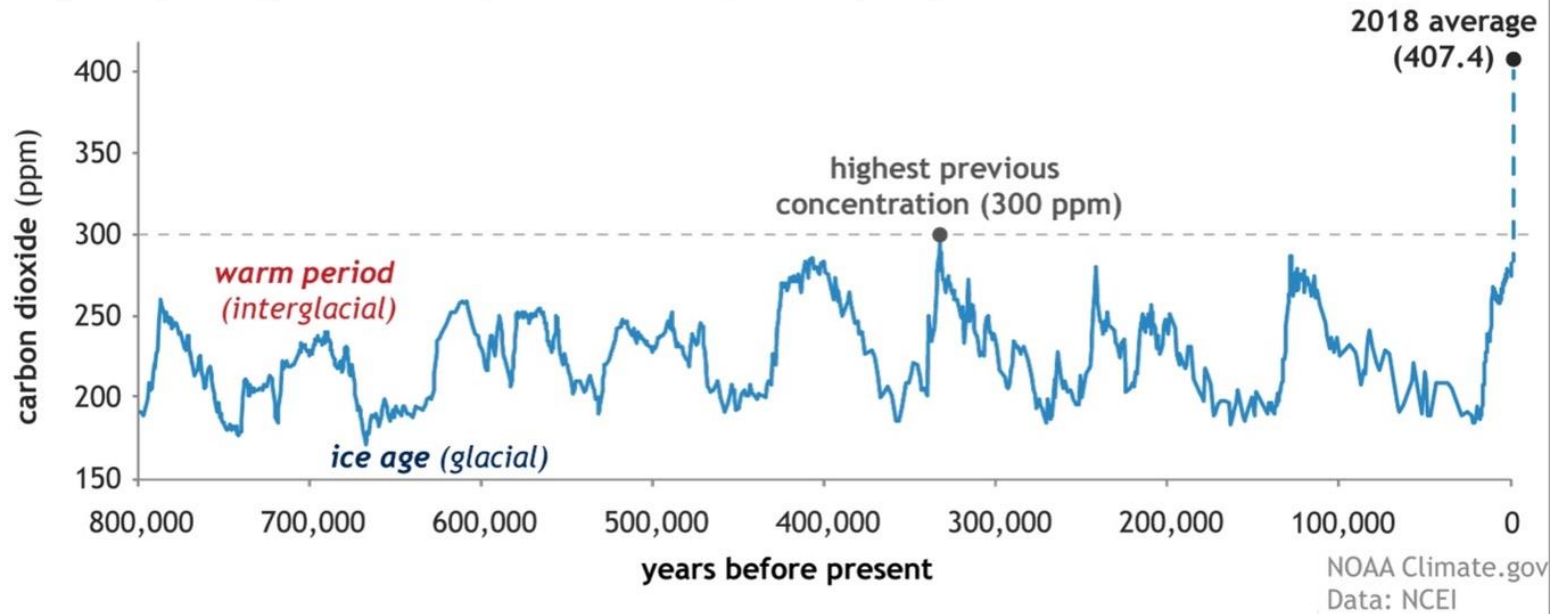
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Climate Emergency - context

CO₂ during ice ages and warm periods for the past 800,000 years



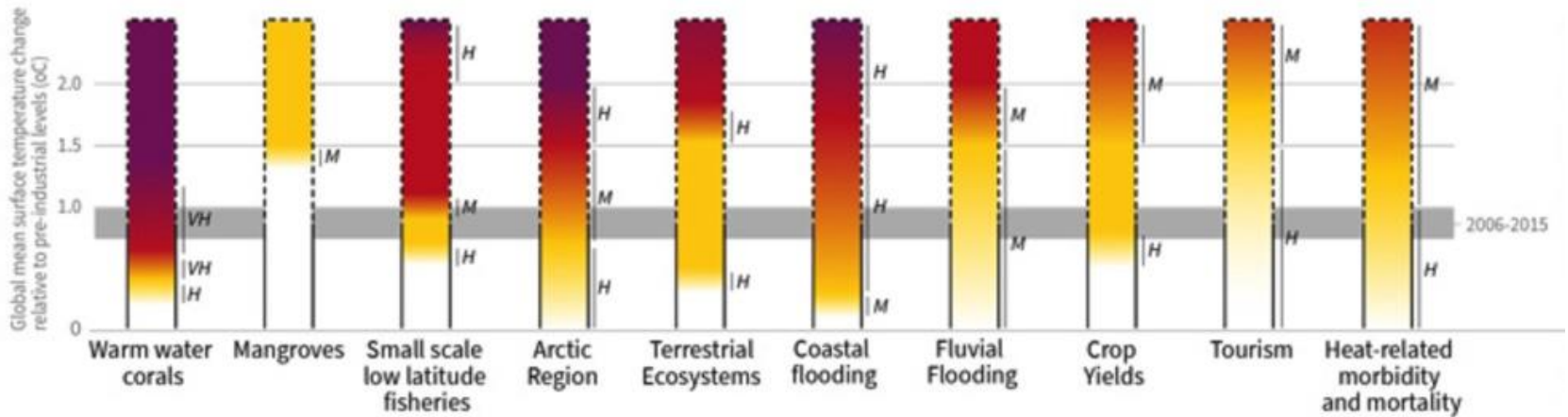
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Climate Emergency - context

Impacts and risks for selected natural, managed and human systems



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Climate emergency – UK context



UK Climate Projections (UKCP)

- Hotter summers: 2018 characteristics 50% of the time by mid-century (high emissions)
- 'Hot days' 3.7 - 6.8°C hotter by 2070 (high emissions)
- Drier summers but more intense summer downpours
- Extension of convective season into autumn
- Warmer, wetter winters
- Sea level rise (London) 0.29m – 0.70m (low emissions) to 0.53m - 1.15m (high emissions)

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Climate emergency – UK context

Figure 1: Top six areas of inter-related climate change risks for the United Kingdom

<p>Flooding and coastal change risks to communities, businesses and infrastructure (Ch3, Ch4 Ch5, Ch6)</p>	<p>MORE ACTION NEEDED</p>
<p>Risks to health, well-being and productivity from high temperatures (Ch5, Ch6)</p>	
<p>Risk of shortages in the public water supply, and for agriculture, energy generation and industry (Ch3, Ch4, Ch5, Ch6)</p>	
<p>Risks to natural capital, including terrestrial, coastal, marine and freshwater ecosystems, soils and biodiversity (Ch3)</p>	
<p>Risks to domestic and international food production and trade (Ch3, Ch6, Ch7)</p>	
<p>New and emerging pests and diseases, and invasive non-native species, affecting people, plants and animals (Ch3, Ch5, Ch7)</p>	<p>RESEARCH PRIORITY</p>
<p>NOW -----> RISK MAGNITUDE -----> FUTURE LOW MEDIUM HIGH</p>	

Ecological emergency

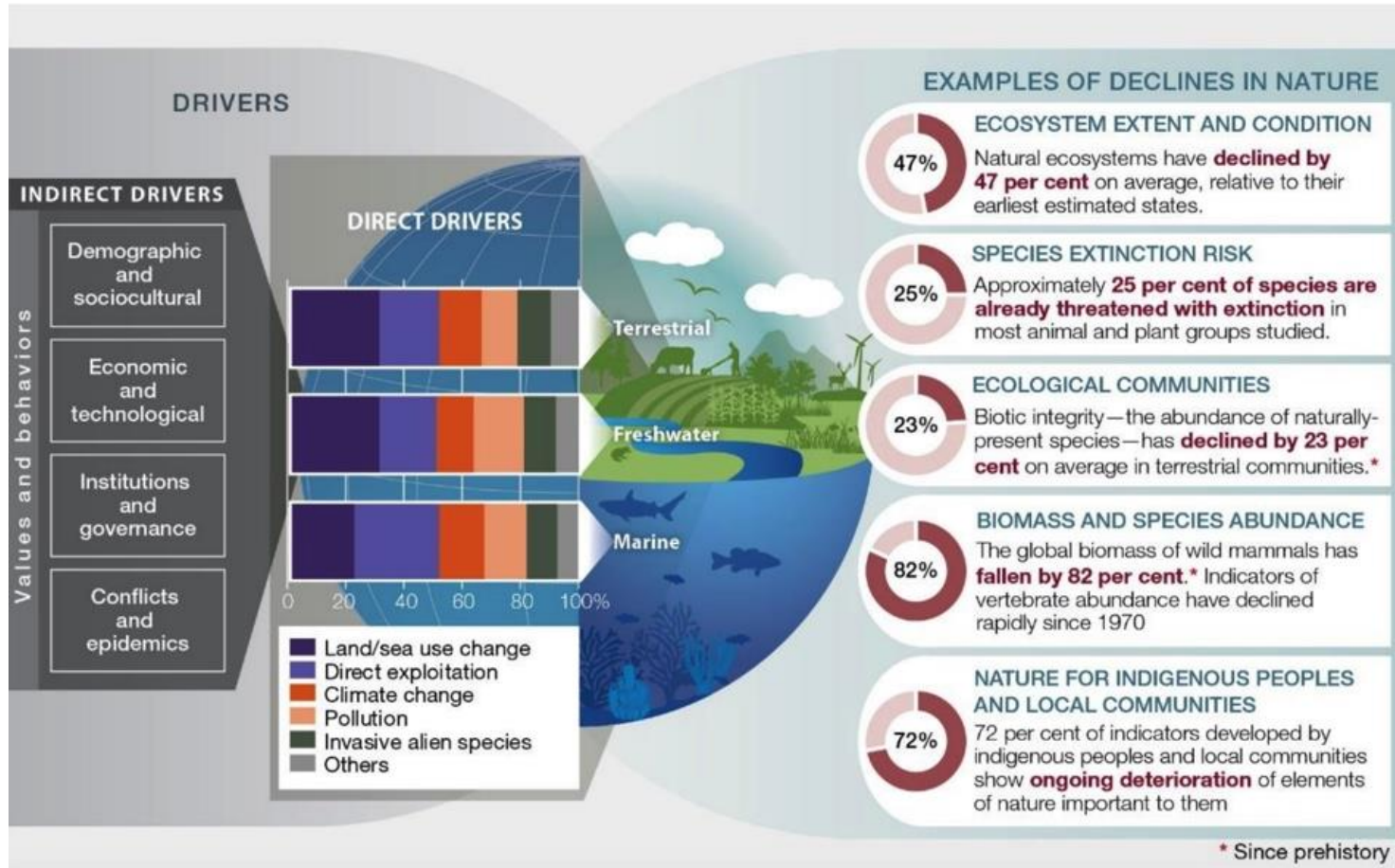
- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services – IPBES 2019 Global Assessment
- 1,000,000 species at risk of extinction
- Rate of decline unprecedented and increasing
- “Transformative change” required –
“a fundamental, system-wide reorganization across technological, economic and social factors, including paradigms, goals and values.”

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Ecological emergency



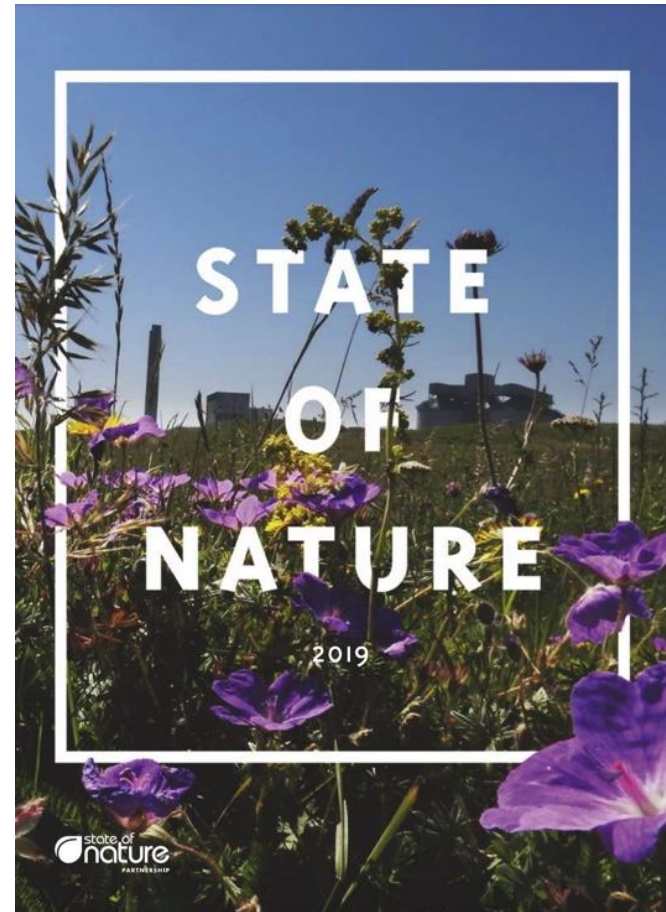
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Ecological emergency – UK context

- 13% average decline in species abundance
- 5% decline in species distribution
- 41% species declined, 26% increased
- 53% of these saw rapid change
- 15% species threatened with extinction from Great Britain



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Policy context – international climate action



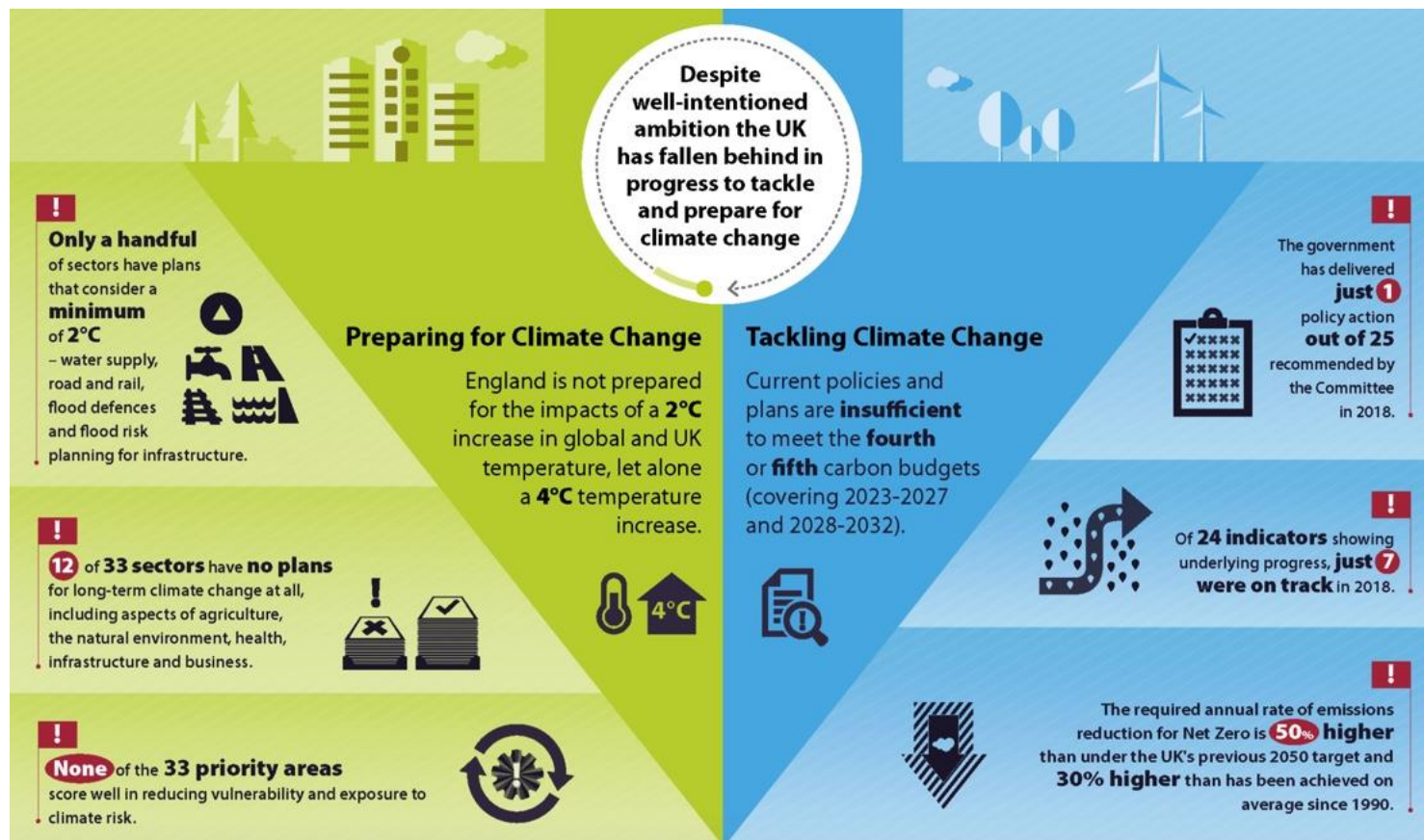
Credit: COP PARIS/Flickr

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Policy context – UK climate action



From CCC 2019 progress report

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Policy context – UK environmental action

- *“the first generation to leave the environment in a better state than we found it”*
- Nature recovery and action on:
 - Air
 - Waste
 - Water
 - Chemicals
 - Climate adaptation
 - Biosecurity
- Post-Brexit, underpinned by an independent “Office for Environmental Protection”



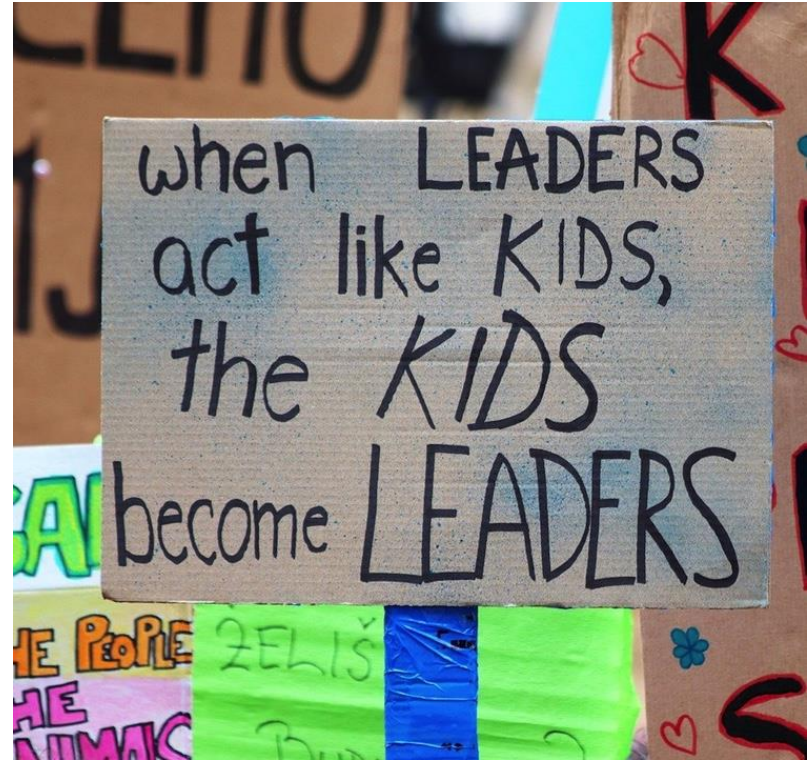
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Policy context – newfound prominence

- 2018 – IPCC 1.5°C report
- Spring 2019 – the ‘Thunberg Effect’
- Messages:
 - Humanity facing an existential crisis
 - Adult generation(s) are responsible
 - Climate change will have a disproportionate impact on the young
 - Too little is being done
- Widespread declarations of climate and ecological emergency

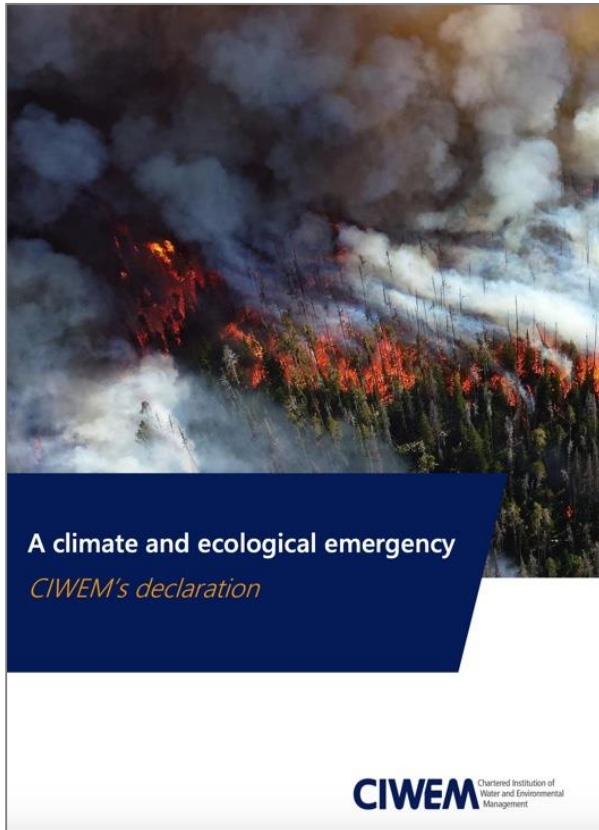


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Climate and ecological emergency



As an Institution, we therefore commit to:

1. **Creating climate and ecological champions of our members,** stakeholders and the public, inspiring urgent action to tackle this shared crisis.
2. **Advocating strongly for ambitious levels of commitment to action** on climate and ecology by decision makers at all levels, alongside appropriate allocation of resources to enable concerted action at all levels of society.
3. **Reviewing our areas of operation** to ensure that they are entirely consistent with delivering as effectively as possible for professionals and the public against the challenges of a climate and ecological emergency. Aiming as an organisation to achieve a net zero emissions target by 2030.
4. **Developing practical programmes** which contribute to ecological recovery and carbon sequestration.
5. **Leading our profession to deliver resilience and adaptation** measures extensively in response to climate risks.
6. **Empowering our members** to work with their own employers, stakeholders and supply chains to deliver zero carbon, resilient and adaptive programmes and projects which deliver biodiversity and wider environmental net gain.
7. **Working with other organisations** to collectively drive and share best practice, reflecting the latest scientific evidence and innovation.

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CIWEM Climate and ecological action plan 2020

3 main thrusts for 2020:

1. Fully carbon footprint our activities, identify main areas for rapid decarbonization, formulate science-based decarbonization targets (declaration pledge 3).
2. Advocate strongly for greater emphasis on, and scrutiny of, progress on climate change adaptation and resilience (declaration pledges 2 and 5).
3. Identify / champion opportunities to deliver decarbonisation AND nature recovery (pledges 2 and 7).

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From where I stand, these are the three most significant issues that the professions must consider to address the climate and environmental emergencies.

1. Lead by example
2. Speak truth to power
3. Do different

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Thanks for listening!

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