



The Rt. Hon. Alok Sharma MP
COP26 President Designate
Cabinet Office
70 Whitehall
London SW1A 2AS

8 March 2021

Dear COP26 President Designate

United Nations Climate Change Conference (“COP26” or “UNCCC”)

Warning signs for UNCCC include India, as the next biggest emitter, ‘reluctant’ to set net zero ‘date’ and will cite developed countries’ failure to fulfil their pre-2020 financial commitments

Clean Air in London’s ground-breaking analysis of over six million Tweets and 25 million ‘engagements’ globally over the last year about air pollution and/or COP26 shows that public discussion around COP26 is focused on vague generalisations not the hard realities of air pollution, biodiversity, cities, finance, health, justice etc.

Successful COP26 must: put the world firmly on track to keep global warming between 1.5c and 2.0c; ensure developed countries deliver on their pre-2020 financial commitments; complete outstanding business such as ‘rules’ (Article 6); and engage a wide range of stakeholders

UK Government must put its ‘own house in order’ if it is to be a credible COP26 ‘host’

I am writing to you on behalf of Clean Air in London (“CAL”) to wish you every success at the United Nations Climate Change Conference (“COP26” or “UNCCC”) due to take place in Glasgow between 1-12 November 2021¹ and encourage the Government to do more in three important areas.

Please take the opportunity to address these issues positively when you meet the Parliamentary ‘Committee on COP26’ at 1030am on Thursday 11 March 2021². We have copied this letter to members of that Committee and several other Select Committee Chairs who should be invited to join the ‘Committee on COP26’.

¹ <https://ukcop26.org/>

² <https://committees.parliament.uk/event/3978>

Summary

The world needs to tackle climate, biodiversity and pollution emergencies (alongside economic and social emergencies that have been exacerbated by COVID-19).

Warning signs for UNCCC are appearing that include India, as the next biggest emitter, being ‘reluctant’ to set a net zero ‘date’ and likely to cite developed countries’ failure to fulfil their pre-2020 financial commitments and the UK failing on its own plan to reach net zero.

CAL’s analysis of UK and other public statements on COP26 in the last two months and a ground-breaking analysis of over six million tweets and 25 million ‘engagements’ globally over the last year about air pollution and/or COP26 shows that public discussion around COP26 is focused on vague generalisations not the hard realities of air pollution, biodiversity, cities, finance, health, justice etc.

CAL is concerned that the UK government has not grasped the magnitude of its responsibility as the COP26 host and is ‘target fixated’ on simply achieving ‘better’ NDCs from Member States rather than focusing on the much more complex requirement to limit global warming to between 1.5c and 2.0c. The last of these will require success in many areas (such as Article 6 and climate finance).

The UK Government must put its own ‘house in order’, engage all stakeholders and address fully all the critical issues if COP26 is to be a success.

1. UNEP’s ‘Making Peace with Nature’ report

UNEP published its first ever ‘synthesis’ report titled ‘Making Peace With Nature: A scientific blueprint to tackle climate, biodiversity and pollution emergencies’ on 18 February 2021.

This was an extremely significant report because the Global Environment Outlook, IPBES and IPCC spoke as ‘one voice’ for the first time about the multiple environmental emergencies of climate, biodiversity and pollution and presented a scientific blueprint to tackle them:

<https://www.unep.org/resources/making-peace-nature>

In the Foreword, the UN Secretary-General said:

“Our central objective [this year] is to build a global coalition for [carbon neutrality]. If adopted by every country, city, financial institution and company around the world, the drive to reach net zero emissions by 2050 can still avert the worst impacts of climate change.”

Key messages of the report are set out here:

<https://wedocs.unep.org/xmlui/bitstream/handle/20.500.11822/35114/MPNKM.pdf>

2. The Climate Emergency

Sir David Attenborough told the UN Security Council³ on 23 February 2021 that:

“We are today perilously close to tipping points that, once passed, will send global temperatures spiralling catastrophically higher. If we continue on our current path, we will face the collapse of everything that gives us our security: food production, access to fresh water, habitable ambient temperature and ocean food chains. And if the natural world can no longer support the most basic of our needs, then much of the rest of civilisation will quickly break down.

“Please, make no mistake, climate change is the biggest threat to security that modern humans have ever faced.”

There is a high degree of concern among the public, legislators and others about ‘climate change’ despite a relatively poor detailed understanding of the short and medium term threats⁴.

In CAL’s view, one of the reasons for the poor understanding of ‘climate change’ is that those two words are used to conflate many issues such as carbon dioxide, emissions, extreme weather, global warming, greenhouse gases, temperature increases and changes in the weather or climate⁵.

3. The Air Pollution Emergency

Air pollution is the world’s largest environmental health risk killing an estimated seven⁶ to eight⁷ million people every year.

Importantly, the vast majority of the causes and sources of global warming and air pollution are the same. For example, carbon dioxide (CO₂) emissions from the use of fossil fuels, including fuel used from generating electricity, in the UK were estimated at 338.0 Mt out of a total of 435.2 Mt CO₂e of total greenhouse gases emissions in 2019 i.e. some 78%:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/875485/2019_UK_greenhouse_gas_emissions_provisional_figures_statistical_release.pdf

<https://www.gov.uk/government/statistical-data-sets/env01-emissions-of-air-pollutants>

<https://www.care4air.org/air-pollutants/greenhouse-gases/>

³ <https://www.gov.uk/government/speeches/pm-boris-johnsons-address-to-the-un-security-council-on-climate-and-security-23-february-2021>

⁴ <https://www.bbc.co.uk/news/uk-56284831>

⁵ https://cleanair.london/app/uploads/Climate-change_Draft-20.01.19_V2.pdf

⁶ https://www.who.int/health-topics/air-pollution#tab=tab_1

⁷ <https://www.seas.harvard.edu/news/2021/02/deaths-fossil-fuel-emissions-higher-previously-thought#:~:text=More%20than%208%20million%20people%20died%20in%202018%20from%20fossil,Leicester%20and%20University%20College%20London>

A number of regulated air pollutants are co-emitted with carbon dioxide (CO₂) during fossil fuel combustion such as oxides of nitrogen (NO_x), black carbon, polycyclic aromatic compounds and carbon monoxide meaning that significant reductions in ambient concentrations might be anticipated as fossil fuel use decreases⁸.

Other pollutants such as secondary particulate matter (PM), ammonia (NH₃), non-methane Volatile Organic Compounds (VOCs), persistent organic pollutants and airborne metals have complex non-combustion sources and have less direct connections to national carbon budgets.

The more scientists investigate the health effects of air pollution, the more they find. In 1952, people were worried about respiratory effects from short-term exposure to visible particles from coal and wood burning. By 1995, concern was emerging about cardiovascular effects from long-term exposure to invisible particles (PM_{2.5}). We now know that every organ in our bodies is affected by air pollution to some extent at every stage of our lives.

The World Health Organisation (WHO) is due to publish new air quality guidelines in 2021⁹. CAL has no inside information but anticipates that the air quality guidelines could be halved from current levels e.g. PM_{2.5} from an annual mean of 10 micrograms per cubic metre (ug/m³) to 5 ug/m³ and nitrogen dioxide (NO₂) from 40 ug/m³ to 20 ug/m³.

The number of people exposed to air pollution exceeding WHO guidelines will rocket, if CAL is right, and make the air pollution emergency starker than ever.

4. Goals and targets for COP26

The Paris Agreement¹⁰ was adopted by 196 parties on 12 December 2015 and entered into force on 4 November 2016. It is a legally binding international treaty with a goal to limit global warming to well below 2 degrees, preferably 1.5 degrees, Celsius compared to pre-industrial levels.

The Paris Agreement requires countries to submit their plans for increasingly ambitious climate action every five years starting in 2020 (deferred to 2021 because of COVID-19) i.e. Nationally Determined Contributions (NDCs). It also left a number of other difficult matters to resolve at COP26 including finance, rulebooks (e.g. Article 6) and obligations of developed countries to support efforts of developing country parties to build clean, climate-resilient futures while for the first time encouraging voluntary contributions by other parties (Articles 9, 10 and 11).

⁸ https://uk-air.defra.gov.uk/assets/documents/reports/cat09/2006240802_Impacts_of_Net_Zero_pathways_on_future_air_quality_in_the_UK.pdf

⁹ <https://www.healtheffects.org/meeting/brussels-meeting-air-pollution-and-health-recent-advances-inform-european-green-deal>

¹⁰ <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement/key-aspects-of-the-paris-agreement>

Key statements this year about the goals and targets for COP26 include the following:

4.1. Gina McCarthy, White House National Climate Advisor, spoke on 30 January 2021

Gina McCarthy explained why climate change is an intersectional issue affecting the economy, racial justice, pollution, young people and human rights. Climate justice is about equal rights. She also explained how to turn the challenges that climate change poses into an opportunity.

<https://twitter.com/WhiteHouse/status/1355541278524628994?s=20>

4.2. Patricia Espinosa, Executive Secretary, UNFCCC spoke about COP26 at the LSE on 3 February 2021¹¹.

Patricia Espinosa set ‘Four tests for success at COP26’:

1. Honour pre-2020 pledges
2. Wrap up outstanding negotiation items [e.g. Article 6 rule book]
3. Lower emissions and raise ambitions
4. Leave no voice behind

<https://twitter.com/PEspinosaC/status/1357041732223959040?s=20>

<https://twitter.com/CleanAirLondon/status/1356943256882450433?s=20>

Patricia Espinosa went on to say that the climate change battle will be won in cities.

On 26 February 2021, UNFCCC published an NDC Synthesis Report that confirmed that countries’ climate commitments are not on track to meet Paris Agreement Goals¹². Importantly, Patricia Espinosa went further and reminded us all that the priorities for COP26 include:

1. Strong NDCs from countries that raise their ambition;
2. Wrap up outstanding negotiation items including modalities such as the use of markets
3. Raise ambition on adaptation and finance; and
4. Bring State and non-State voices together to continue building climate ambition.

Developed countries must deliver on their pledge to jointly mobilise \$100 billion annually to developing nations – that commitment has not yet been met resulting in a significant loss of trust among parties.

These tests are consistent with those identified by Parliament’s Business Energy and Industrial Strategy Committee in its report titled ‘COP26: Principles and priorities’ dated 26 November 2020¹³.

¹¹ <https://www.lse.ac.uk/Events/2021/02/202102031200/espinosa>

¹² <https://unfccc.int/news/climate-commitments-not-on-track-to-meet-paris-agreement-goals-as-ndc-synthesis-report-is-published>

¹³ <https://committees.parliament.uk/publications/3670/documents/35772/default/>

4.3. Alok Sharma's address to UN Member States on 8 February 2021¹⁴ set four goals for COP26.

You set four goals for COP26 in that important speech.

1. Step change in emissions reductions
2. Strengthen adaptation
3. Get finance flowing
4. Enhance international collaboration

<https://twitter.com/CleanAirLondon/status/1359160090037731330?s=20>

You explained that you want to work with Member States to get the world on track to make Paris a reality. There are some important inconsistencies between the UK and UNFCCC goals.

4.4. Chatham House on-the-record research event 'India's Foreign Policy Challenges: A Balancing Act?' on 25 February 2021¹⁵

One of the participants, the highly regarded Ambassador Kanwal Sibal, Former Foreign Secretary of India, was asked (by CAL) whether India would be a leader or laggard at COP26?

Ambassador Sibal replied that India would meet its NDC commitment and make pledges on renewables (particularly solar) but will be reluctant to commit to a 'date' to achieve net zero and will highlight failures by others on financial commitments. Another participant, The Rt. Hon. Vince Cable, commented in his closing remarks that India, as the next largest emitter without a commitment to a net zero deadline, may be 'embarrassed' at COP26 without one. See:

<https://twitter.com/CleanAirLondon/status/1364916366134939652?s=20>

In CAL's view, the UK must ensure that developed countries fulfil their financial commitments to developing countries if we are to expect the latter to make new commitments. In this regard, HM Treasury should take a lead in encouraging other Member States to fulfil their financial commitments before COP26 and thereafter.

4.5. Mark Carney, the Prime Minister's Finance Adviser for COP26, appeared to get into some difficulty last week

Mark Carney appeared to get into some difficulty recently after making comments that seemed to confuse 'carbon neutral' (akin to 'air quality neutral' which means no worsening of air pollution) and net zero (akin to zero air emissions which means virtually no emissions). See:

<https://www.bloomberg.com/news/articles/2021-02-25/mark-carney-s-brookfield-net-zero-claim-confounds-climate-experts>

¹⁴ <https://www.gov.uk/government/speeches/cop26-president-addresses-un-member-states>

¹⁵ <https://www.chathamhouse.org/events/all/research-event/indias-foreign-policy-challenges-balancing-act>

In CAL's experience, such mistakes or misunderstanding are common among policy makers, legislators and others. As host of COP26, all members of the UK team must grasp this point.

4.6. Antonio Guterres, Secretary General of the UN, statement on 2 March 2021

Antonio Guterres called on all governments, private companies and local authorities to take three Climate Action steps:

1. Cancel all global coal projects in the pipeline
2. End coal plant financing and shift investment to renewable energy projects
3. Jump-start a global effort to a just transition

<https://twitter.com/antonioguterres/status/1366845766921162753?s=20>

CAL has been pleased to see your leadership and recent statements pointing in this direction:

<https://www.gov.uk/government/speeches/alok-sharma-speaks-at-launch-of-unfccc-regional-climate-weeks>

4.7. Social media – CAL's Clean Air Poll

CAL launched a Clean Air Poll on Twitter on 3 February 2021 asking:

#CleanAirPoll | Which of the following issues is *the* most important to address at #COP26 alongside #NetZero and #Finance?

#AirPollution	39.3%
#Health	31.4%
#Justice	19.3%
#Cities	10.0%

<https://twitter.com/CleanAirLondon/status/1356784357135028225?s=20>

3,525 votes.

CAL was not surprised that Cities came fourth because all the above issues come together in Cities.

4.8. CAL has undertaken a ground-breaking analysis of tweets globally over the last year

CAL has undertaken a ground-breaking analysis of over six million tweets and 25 million 'engagements' globally over the last year that mention air pollution and/or COP26 (or related keywords). Less than 1% of the tweets about air pollution mention COP26 and vice versa despite around 80% of the causes and sources of these problems being the same.

The picture is similar for biodiversity, cities, finance, health, justice and nature although there has been some improvement over the last month since CAL started highlighting this discrepancy.

The results are summarised in the table below and more fully in Appendices One and Two. Categories may include some multi-counting.

Ranking	Air pollution	COP26
1	Air pollution	COP26
2	Health	Climate activists
3	Cities	Climate change
4	Pollutants e.g. GHG and PM _{2.5}	Climate emergency
5	Extreme weather and disasters	Pollutants e.g. GHG or PM _{2.5}
Ranking	Air pollution	COP26
16	Biodiversity and nature	Justice
17	Finance	Fake news or denial
18	Net zero	Extreme weather or disasters
19	Fake news or denial	Cities
20	COP26	Air pollution

In CAL's view, the data confirms that the air pollution and climate change audiences are not thinking holistically or combining their efforts. In relation to COP26:

1. many issues are being conflated by the words 'climate change'.
2. public discussion is focused on sweeping generalisations.
3. online discussion is dominated by a handful of climate activists e.g. Greta Thunberg.
4. the importance of air pollution, biodiversity, cities, climate change, health, justice and nature is not being addressed for COP26 (and vice versa).

Frankly, this discrepancy highlights the silo-based thinking around environmental issues which CAL identified in 2006 when it was founded to fight air pollution holistically (see Appendix 3).

CAL would be pleased to discuss the detailed data with you.

4.9. Media coverage and comment about the need for UK leadership at COP26

On Friday 19 February 2021, an article in the media titled 'Visionless climate summit hit by 'lack of political leadership'' quoted a journalist after an off-the-record briefing with COP26 officials:

"I genuinely have no idea what they want out of COP26 in terms of actual outcomes. It's a mystery."

<https://www.politico.eu/article/visionless-cop26-hit-by-lack-of-political-leadership/>

This is consistent with the Government's failure also to set out a plan and put in place supporting legislation and regulations for the UK to reach net zero emissions¹⁶.

<https://committees.parliament.uk/committee/127/public-accounts-committee/news/149560/government-has-no-plan-for-achieving-net-zero-two-years-after-setting-target-in-law/>

5. Vision for COP26: The only acceptable outcomes from COP26

CAL applauds your leadership of COP26. However, we remain concerned that the Government is setting its sights too low, too narrowly and will fail at COP26. CAL is also concerned that the UK's goals are noticeably different to UNFCCC's tests which are based on a deep understanding of the Paris Agreement and decades of experience of such UN events.

In CAL's view, the only acceptable aims for COP26 are:

1. COP26 must deliver firm commitments from countries that put the world on track to keep global warming between 1.5c and 2.0c and adapt to its consequences.
2. mechanisms must be put in place to deliver on pre-2020 commitments, including finance and rule books.
3. in order to achieve 1 and 2 and ensure progress beyond 2021, COP26 must engage and mobilise everyone everywhere.

The UK must also put its own 'house in order' if it is to have any hope of achieving the above.

Put bluntly, how can the UK persuade India to set a deadline to achieve net zero emissions when India has made a smaller contribution to total historic emissions, has been let down by the failure of developing countries to fulfil their climate finance commitments and the UK government:

- i. has no legislation or plans in place to achieve its own net zero commitment by 2050 (or the Prime Minister's 10-point plan for a green recovery e.g. legislation to enforce the UK's aim of banning the sale of petrol and diesel cars by 2030);
- ii. is breaching existing international treaties for the national control of emissions in 2020 and beyond i.e. national emissions ceilings for ammonia and PM_{2.5} under the Gothenburg Protocol and the National Emission Ceilings Regulations 2018¹⁷;
- iii. is breaching nitrogen dioxide limit values more than 10 years after the deadline to comply with them and failing to adopt appropriate measures to ensure compliance as soon as possible (as confirmed by the Court of Justice of the European Union on 4 March 2021¹⁸);
- iv. has set no deadlines to ban the sale (and use) of solid fuel burners or solid fuel burning on-grid as the Climate Change Committee says is needed between 2028 and 2033¹⁹;

¹⁶ <https://www.theguardian.com/environment/2021/mar/05/boris-johnson-failing-on-uk-plan-to-reach-net-zero-say-mps>

¹⁷ https://cleanair.london/app/uploads/CAL-396-Response-to-Defra-on-NH3_260121_Scanned-reduced.pdf

¹⁸ <http://curia.europa.eu/juris/document/document.jsf?text=&docid=238474&pageIndex=0&doclang=EN&mode=req&dir=&occ=first&part=1&cid=8433023>

¹⁹ <https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf>

- v. Defra hasn't sent a media release to weather or environment journalists warning about an air pollution episode since 21 April 2011²⁰ (when several are likely this spring and summer); and
- vi. cannot even bring itself to include the WHO's current (or new) air quality guidelines in its thrice delayed Environment Bill²¹?

In essence, the whole UK government needs to understand the magnitude of the task ahead and put in place all the steps necessary to ensure success at COP26. There is still time, but it is running out for COP26 and the world itself.

6. CAL's recommendations

To achieve success at COP26, the UK Government must:

1. demonstrate that it fully understands the scale and magnitude of the task at hand and put its own 'house in order'.
2. engage all stakeholder groups and the general public.
3. align its priorities with those of UNFCCC and ensure that all the critical issues are addressed fully at COP26 (e.g. Article 6 and finance) to keep global warming between 1.5c and 2.0c.

In CAL's view, the best way to achieve the first two of these tasks would be to introduce a new Clean Air Act before COP26 (i.e. exactly 65 years after the first one made the UK a world-leader). This simple and widely supported legislation would:

1. update the Clean Air Act for modern fuels, technologies and circumstances in ways that the Environment Bill fails to do;
2. decarbonise homes and other buildings, which are responsible for some 78% of greenhouse gas emissions in a city like London, to protect public health and mitigate climate change (as the Green Homes Grants were intended to do)²²;
3. give Metro Mayors and local authorities the powers they need to require zero or ultra low emission technologies in 'Air Pollution Control Areas';
<https://www.london.gov.uk/press-releases/mayoral/call-to-ban-new-petrol-and-diesel-vehicles>
<https://www.uk100.org/blog/2021/01/city-leaders-call-tougher-pollution-targets-and-ps15bn-air-pollution-fund>
4. set dates for the end of sales of solid fuel burners and their use within the gas grid; and
5. capture the public's imagination.

CAL has drafted the full text of a new Clean Air (Health of Current and Future Generations) Bill:

https://cleanair.london/app/uploads/CAA_New-Clean-Air-Act_First-draft-011220.pdf

It could rely on existing human rights rather than need to create new ones.

²⁰ <https://www.gov.uk/government/news/high-pollution-episode-warning-first-summer-smog-of-2011>

²¹ CAL has suggested that the Environment Bill should follow the Climate Change Act 2008's approach of comply [with WHO air quality guidelines] or explain to Parliament with a backstop date to comply with the new guidelines of 2030

²² <https://www.gov.uk/guidance/apply-for-the-green-homes-grant-scheme>



Please also ask the 'Committee on COP26' to extend its membership to include a number of other committees because health, justice, local government and planning, national security and Wales are as important as any other topic already included.

I would be pleased to discuss these points with you and/or provide further information.

Yours sincerely

Simon Birkett
Founder and Director
Clean Air in London

cc

Darren Jones MP, Chair, Business, Energy and Industrial Strategy Committee
Rt Hon Philip Dunne MP, Chair, Environmental Audit Committee
Rt Hon Greg Clark MP, Chair, Science and Technology Committee
Tom Tugendhat MP, Chair, Foreign Affairs Committee
Sarah Champion MP, Chair, International Development Committee
Rt Hon Mel Stride MP, Chair, Treasury Committee
Huw Merriman MP, Chair, Transport Committee
Peter Wishart MP, Chair, Scottish Affairs Committee
Neil Parish MP, Chair, Environment Food and Rural Affairs Committee
Sir Bernard Jenkin MP, Chair, Liaison Committee

Rt Hon Tobias Ellwood MP, Chair, Defence Committee
Rt Hon Jeremy Hunt MP, Chair, Health Committee
Clive Betts MP, Chair, Housing, Communities and Local Government Committee
Sir Robert Neill MP, Chair, Justice Committee
Rt Hon Stephen Crabb MP, Chair, Welsh Affairs Committee

Enc.

Appendix 1

Twitter volume on air pollution and/or COP26 globally in the 12 months to 28 February 2021

Relative ranking of 20 themes by COP26

Themes	Example keywords	Specific examples	Ranking by volume	
			Air pollution	COP26
UN Climate Change Conference (COP26)	@Alok_Sharma_RDG, COP26, Climate Change Conference, @PEspinozaC, #togetherforourplanet, @UNFCCC	Primary input	20	1
Climate activists	@BlackPink, climate action, #climatestrike, #FridaysForFuture, @GretaThunberg, #schoolstrike4climate	Greta Thunberg, Black Pink (in South Korea) or equivalents and their hashtags	14	2
Climate change	climate change	General public concern about climate change e.g. protests	10	3
Climate emergency	climate crisis, climate emergency, survival, threat	Declarations of Climate Emergency or general sense or public alarm	13	4
Pollutants e.g. GHG and PM2.5	carbon dioxide, emissions, greenhouse gases, methane, NO2, ozone, PM2.5	Key polluter whether by consumption or production	4	5
Net zero	#carbonneutral, #netzero, #racetozero, zero	Commitments to achieve net zero by a given date in law. Excludes 'waste'	18	6
Adaptation and resilience	adapt, adaptation, coastal, desertification, protect, resilience, sea level, SIDS	Desertification in Middle East, new city of Neom in Saudi Arabia, sea level rise affecting Small Island Developing States or US defence assets	9	7
Fossil fuels	coal, diesel, fossil fuel, fracking, gas, oil, pipeline, wood	New coal fired power stations, oil dependency or removal of subsidies. Excludes 'greenhouse'	8	8
'Building forward' (aka Build Back Better)	electric, clean energy, green economy, #greenrecovery, innovation, solar, technology, transition	Green economy successes, renewables or technology	11	9
Finance	bank, #economy, finance, investor, @markjcarney	Mobilisation of £100bn of climate finance annually by 2020 from developed countries	17	10
Sectors excluding 'Building forward'	chemicals, construction, food, iron, meat, steel, transport, waste	Catch all for major emitting or legacy sectors that are seen as laggards e.g. chemicals, food, infrastructure, livestock industry, meat, transport or waste	6	11
Health	asthma, death, lung, heart, health, stroke, @WHO	Concern about health, heatwaves or vector-borne diseases	2	12
Biodiversity and nature	biodiversity, #formature, nature, #peacewithnature, terra carta	Countries known for biodiversity or losing it e.g. Costa Rica and Madagascar respectively	16	13
Mitigation	coal-fired, deforestation, mitigate, mitigation, reduce	Politically challenging sources to mitigate e.g. deforestation in Brazil or coal use in Poland	7	14
Global warming	global warming, temperature	Concern about temperature rise	15	15
Justice	civil society, equality, gender, human right, inclusion, justice, racial, #thetimeisnow, vulnerable	Legal cases e.g. Ella Roberta Adoo Kissi-Debrah, Jakarta lawsuit	12	16
Fake news or denial	denial, deny, fake, fraud, scam	Climate change denial	19	17
Extreme weather and disasters	aqi, bushfire, disaster, dust, episode, flood, glacier, heatwave, smog, storm	Bushfires, droughts, floods, smog episodes, storms, Uttarakhand Chamoli glacier	5	18
Cities	cities, @c40cities, delhi, london, mayor, new york, urbanisation, migration	Cities taking a lead on climate. Urbanisation or migration. Excludes 'Glasgow' and 'Paris'	3	19
Air pollution	air quality, air pollution, clean air	Primary input	1	20

* Using Sprout Social 'Listening' and selected Clean Air in London keywords and metrics

**Colours are used to create a visual impression from Red (1-4) to Green (16-20)

Appendix 2

Twitter volume on air pollution and/or COP26 globally in the 12 months to 28 February 2021

Relative ranking of 20 themes by air pollution

Themes	Example keywords	Specific examples	Ranking by volume	
			Air pollution	COP26
Air pollution	air quality, air pollution, clean air	Primary input	1	20
Health	asthma, death, lung, heart, health, stroke, @WHO	Concern about health, heatwaves or vector-borne diseases	2	12
Cities	cities, @c40cities, delhi, london, mayor, new york, urbanisation, migration	Cities taking a lead on climate. Urbanisation or migration. Excludes 'Glasgow' and 'Paris'	3	19
Pollutants e.g. GHG and PM2.5	carbon dioxide, emissions, greenhouse gases, methane, NO2, ozone, PM2.5	Key polluter whether by consumption or production	4	5
Extreme weather and disasters	aqi, bushfire, disaster, dust, episode, flood, glacier, heatwave, smog, storm	Bushfires, droughts, floods, smog episodes, storms, Uttarakhand Chamoli glacier	5	18
Sectors excluding 'Building forward'	chemicals, construction, food, iron, meat, steel, transport, waste	Catch all for major emitting or legacy sectors that are seen as laggards e.g. chemicals, food, infrastructure, livestock industry, meat, transport or waste	6	11
Mitigation	coal-fired, deforestation, mitigate, mitigation, reduce	Politically challenging sources to mitigate e.g. deforestation in Brazil or coal use in Poland	7	14
Fossil fuels	coal, diesel, fossil fuel, fracking, gas, oil, pipeline, wood	New coal fired power stations, oil dependency or removal of subsidies. Excludes 'greenhouse'	8	8
Adaptation and resilience	adapt, adaptation, coastal, desertification, protect, resilience, sea level, SIDS	Desertification in Middle East, new city of Neom in Saudi Arabia, sea level rise affecting Small Island Developing States or US defence assets	9	7
Climate change	climate change	General public concern about climate change e.g. protests	10	3
'Building forward' (aka Build Back Better)	electric, clean energy, green economy, #greenrecovery, innovation, solar, technology, transition	Green economy successes, renewables or technology	11	9
Justice	civil society, equality, gender, human right, inclusion, justice, racial, #thetimeisnow, vulnerable	Legal cases e.g. Ella Roberta Adoo Kissi-Debrah, Jakarta lawsuit	12	16
Climate emergency	climate crisis, climate emergency, survival, threat	Declarations of Climate Emergency or general sense or public alarm	13	4
Climate activists	@BlackPink, climate action, #climatestrike, #FridaysForFuture, @GretaThunberg, #schoolstrike4climate	Greta Thunberg, Black Pink (in South Korea) or equivalents and their hashtags	14	2
Global warming	global warming, temperature	Concern about temperature rise	15	15
Biodiversity and nature	biodiversity, #fornature, nature, #peacewithnature, terra carta	Countries known for biodiversity or losing it e.g. Costa Rica and Madagascar respectively	16	13
Finance	bank, #economy, finance, investor, @markjcarney	Mobilisation of £100bn of climate finance annually by 2020 from developed countries	17	10
Net zero	#carbonneutral, #netzero, #racetozero, zero	Commitments to achieve net zero by a given date in law. Excludes 'waste'	18	6
Fake news or denial	denial, deny, fake, fraud, scam	Climate change denial	19	17
UN Climate Change Conference (COP26)	@Alok_Sharma_RDG, COP26, Climate Change Conference, @PEspinozaC, #togetherforourplanet, @UNFCCC	Primary input	20	1

*Using Sprout Social 'Listening' and selected Clean Air in London keywords and metrics

**Colours are used to create a visual impression from Red (1-4) to Green (16-20)

Appendix 3

Clean Air in London

CAL has campaigned for 15 years to achieve, urgently and sustainably, full compliance with World Health Organisation (WHO) air quality guidelines in London and elsewhere. Our campaign has deliberately aimed to build public understanding of air pollution with advice for people on protecting themselves (i.e. adaptation or resilience) and reducing pollution for themselves and others (i.e. mitigation) in the years up to 2020.

One of the six fundamental principles underpinning our campaign has been to ‘Treat air pollution holistically i.e. air quality and climate change’. This was born of our recognition that people setting climate change targets for 2030 and 2050 were like generals in a Chateau behind the front lines in the First World War drawing sweeping lines on a map to invade France or Germany depending on which side they were on. Meanwhile in the ‘air pollution’ trenches, in mega cities like London, air pollution continues to exceed WHO guidelines day in, day out. CAL’s mission is therefore to mobilise political leadership, technology and lifestyle change in a mega city like London to show the world how to achieve their wider climate, environmental and sustainability objectives.

Our campaign has focused therefore on air pollution in London and ‘up’ (not ‘out’ to other cities or issues) for 15 years i.e. neighbourhood, London Mayor, UK government, European Parliament and European Commission, WHO and the United Nations. Between 2015 and 2019, Simon Birkett chaired the Knightsbridge Neighbourhood Forum²³ which produced the first neighbourhood plan in central London and was the first and sole air pollution stakeholder on the High Level and Inter-Governmental Stakeholder and Advisory Group for UNEP’s sixth Global Environment Outlook (“GEO-6”)²⁴ which was the United Nations’ most comprehensive report on the global environment since 2012.

CAL has succeeded largely by highlighting the need for political leadership, technology and lifestyle changes noting that ‘lifestyle changes’ include a range of measures (from bans, charges, public understanding campaigns and incentives through to ‘adoption’). As an example of the latter, CAL created the political space for diesel bans in London by making the political costs of inaction greater than action (primarily by highlighting the health impact of diesel exhaust).

Note: CAL’s was established formally on 5 January 2007²⁵ after writing its first letter to Ken Livingstone on 9 April 2006²⁶.

²³ <https://www.knightsbridgeforum.org/>

²⁴ <https://cleanair.london/hot-topics/sixth-global-environment-outlook-geo6/>

²⁵ <https://cleanair.london/sources/invitation-to-pledge-support-to-the-campaign-for-clean-air-in-london/>

²⁶ <https://cleanair.london/solutions/mayors-consultation-on-the-low-emission-zone/>