

**FORUM  
FOR THE  
FUTURE**

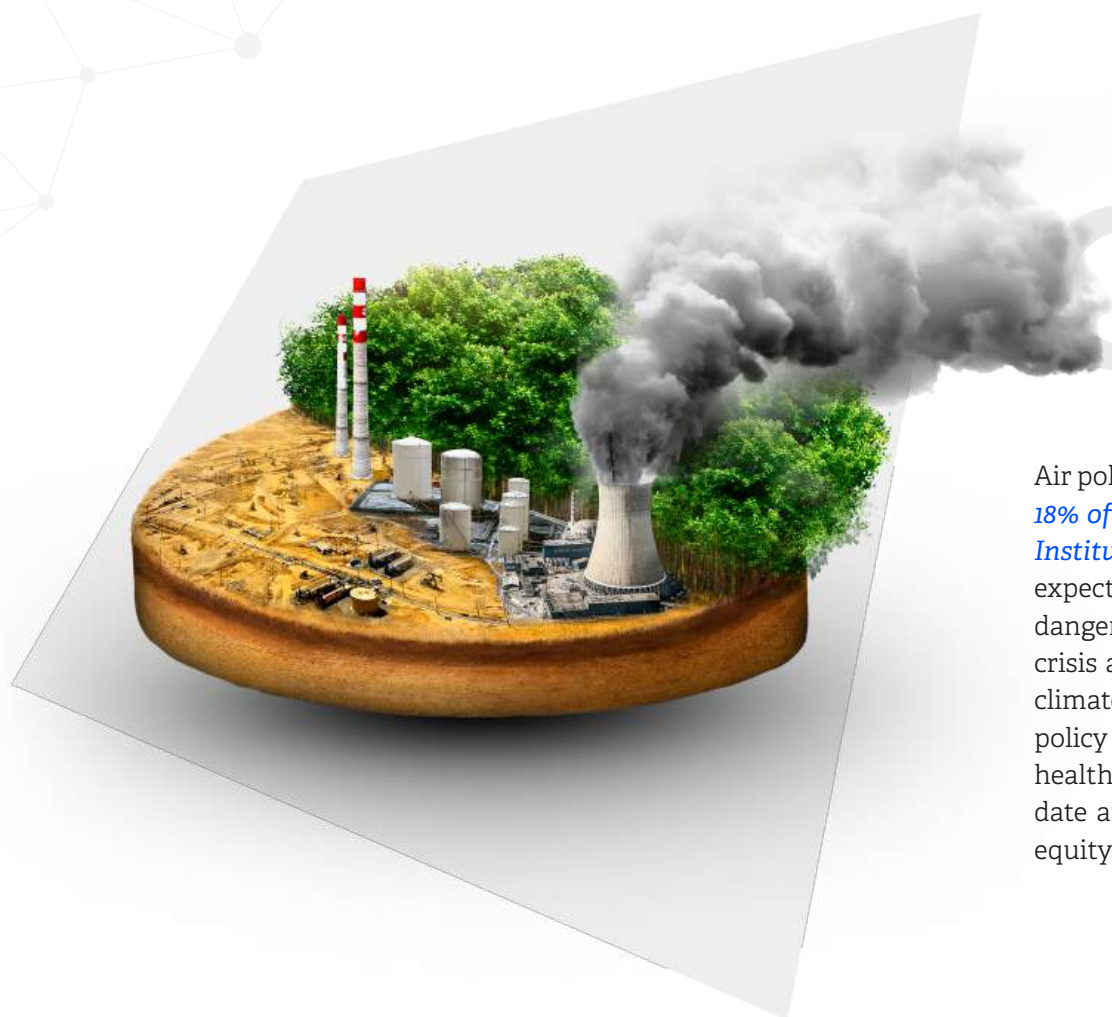
# POLICY AS A ROUTE TO **CLEANER AIR**

**WHY A SYSTEMIC, CROSS-SECTOR  
APPROACH MATTERS**

**CLEAN  
AIR  
FUND**

*Touché*  
**Pharmaceutical  
consulting**





# CONTEXT

Air pollution is one of the biggest causes of death globally, accounting for an estimated *18% of total global deaths in 2018* – just under 1 in 5. Being cited by the *Energy Policy Institute at the University of Chicago* as “the greatest external threat to human life expectancy on the planet” it has been compared to the danger of smoking, and is more dangerous than alcohol or unsafe water. The drivers behind the global air pollution crisis are also the drivers of climate change, and having this understanding that the climate crisis is a health crisis is key to developing integrated policy approaches. Urgent policy actions at every level are needed to prevent the risks of air pollution to human health, especially within exposed and vulnerable communities. Yet policy actions to date are siloed within each sector and often fail to place human health and health equity in the centre.

This report – commissioned by the Clean Air Fund and produced by Forum for the Future in partnership with iovoli pharmaceutical consulting - calls for more integrated environmental and health policy mechanisms that prevent and reduce outdoor air polluting emissions.

The report identifies four key dimensions in responding to the challenge area.

**1** SYSTEMIC  
ROOT  
CAUSES

**2** GOVERNANCE  
AND  
ACCOUNTABILITY

**3** HEALTH  
EQUITY

**4** PLACE-BASED  
APPROACHES

The report includes recommendations for life science and buildings companies, and NGOs and philanthropies working on air pollution and health. The recommendations are structured by sector. The full report contains case studies, bringing to life approaches to tackling outdoor air pollution in the life sciences and construction sectors.

Large-scale change is influenced or created by multiple factors, and policy as a lever of change is the focus of this report. Policy can be understood as a set of plans, practices or procedures that compel or constrain actions, towards a particular goal. Policy can be voluntary or mandatory, and can be established at international, national and organisational levels.

The scope of this report, and the research that underpins it, is intentionally tightly defined: examining outdoor air pollution policy mechanisms at the intersection of the life science and the building sectors, with a specific focus on the construction phase of buildings. The scope selection was in part firstly because it is a prime example of where health-harming outcomes risk being caused, even by a health-focused sector such as life-sciences. Secondly, because early-stage project research showed that, whilst both the environmental impact during a building's use-phase life-cycle and the environmental impact of building materials are relatively well considered within policy, outdoor air pollution during the construction phase specifically is not.

The intention behind the study was to develop policy recommendations that are scope-specific but also provide broader recommendations on how to use policy as a lever of change to drive co-benefits at the intersection of climate and health. This approach is core to that taken by the [Climate and Health Coalition](#), an initiative convened by Forum for the Future that aims to mobilise and equip the private sector to accelerate the integrated transformation of our health and climate systems, towards outcomes that deliver benefits for both people and planet. This report sits within the wider realm of climate and health-focused work that Forum for the Future drives.

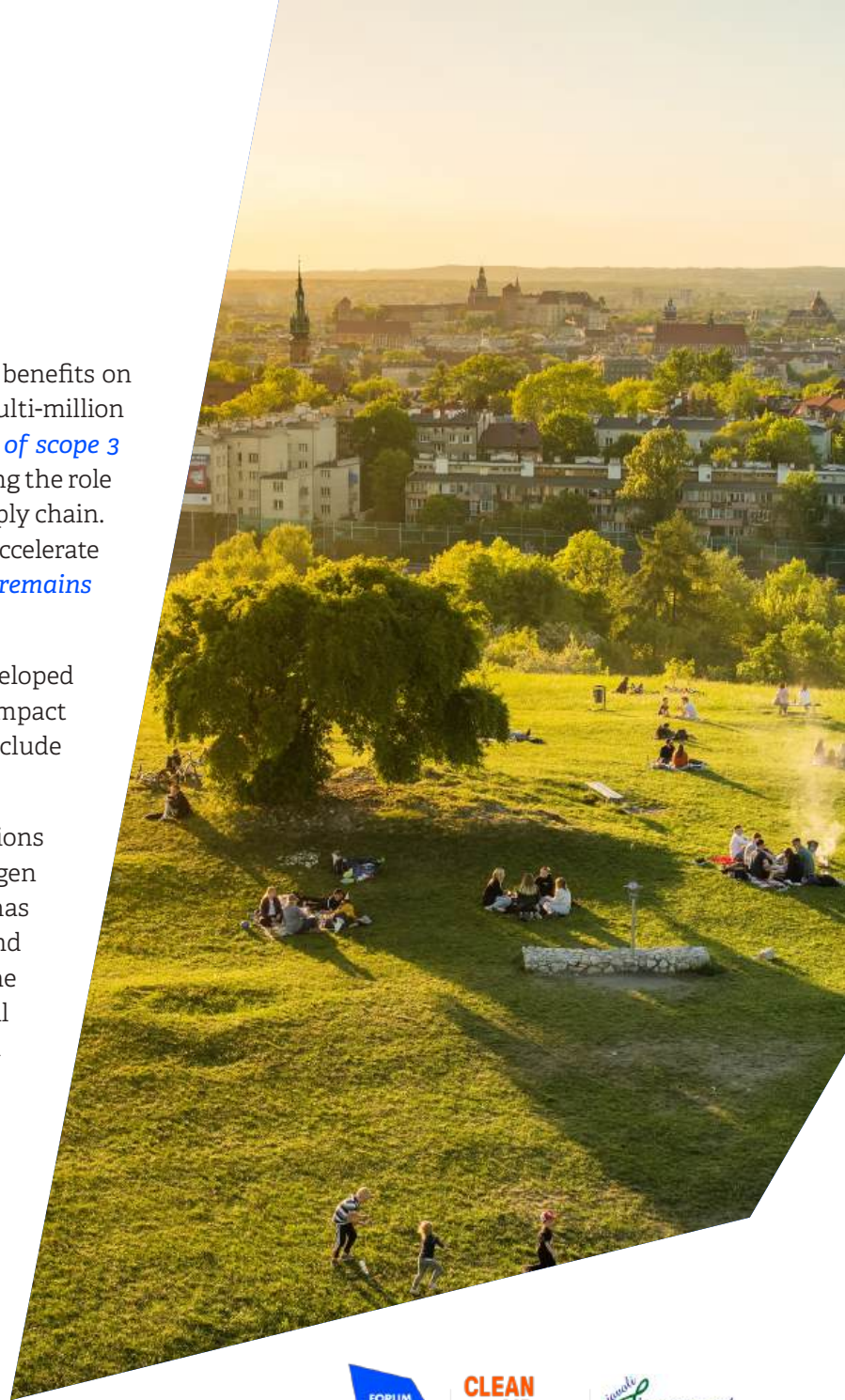


# FOCUS ON THE LIFE SCIENCES SECTOR

In addition to being worth over £94 billion to the UK economy, the life science sector conveys wider benefits on health by bringing medicines to patients that need them. In 2023 the UK government announced a multi-million investment in Life Sciences, the “*Life Sci for Growth*” package. Yet pharmaceuticals contribute *25% of scope 3 GHG emissions* within the UK healthcare sector, and companies themselves are increasingly recognising the role they must have in reducing unintended harms on human health from their direct operations and supply chain. Leading pharmaceutical companies are collaborating under the *Sustainable Markets Initiative* to accelerate the industry’s decarbonisation and there is evidence that progress is being made, although *scope 3 remains challenging*.

Other external pressures are forcing the industry to change. New *EU medicines regulation* being developed is expected to strengthen mandated information provided by companies on the environmental impact of medicines - what this means in practice is not yet clear. *Medicines tenders* are beginning to include environmental impact as a procurement criteria.

However, the life science sector does not yet generally estimate or report air polluting emissions. Exceptions are large global companies that are members of the *Alliance for Clean Air* including GSK, Haleon, Biogen and Accenture. Despite its lack of maturity in relation to air quality mitigation, the life science sector has strong potential to be a critical lever for systemic change. It has a wide-reaching sphere of control and influence across multiple other systems, see figure below. Indeed, the number of employees within the industry itself or across its supply chain are likely to run into the millions, and almost every individual worldwide depends upon access to healthcare, upon which access to medicines have a profound influence.







# SYSTEMIC ROOT CAUSES

In exploring a specific issue – such as policies that tackle air pollution during the construction phase of life sciences buildings - the systemic context matters. In examining the barriers or enablers for change we must look at root causes of why taking action on air pollution at this intersection might be inhibited. At the most macro level, the dominance of Gross Domestic Product (GDP) as the primary measure of progress, speaks to the mindset out of which our global systems have arisen. The goals of our systems - as measured by GDP through which lens all growth is good growth - drive behaviours that can result in negative social and environmental outcomes at every level of the system. Ultimately, the simplistic dominance of GDP inhibits progress on improving air quality because profits and growth take priority over environmental and social impacts, including air quality, and the impacts on planetary and human health. The true costs of the externalities of, for example, clean air, are not costed into our global economic models, resulting in behaviours that do not value these externalities.

Interview participants in the most proactive, mature businesses on the issue being examined spoke about the critical importance of their leadership and shareholders being willing to take purpose-driven decisions, at the potential expense of profit maximisation. This demonstrates the importance of leadership mindsets that are prepared to set organisational goals that encompass a wider definition of progress and positive impact than the dominant paradigm of GDP. In our wider work at Forum for the Future we frequently encounter leaders who are aware that the limits to their ambitions for positive impact are constrained by the dominant operating context of GDP. This collective frustration has the potential to be a collaborative force for change, if networked, connected and oriented towards influencing different systemic goals and policy shifts.



# 2

## GOVERNANCE AND ACCOUNTABILITY

Key to the effectiveness of policy-based approaches and voluntary standards is the governance and accountability that underpins the implementation of them. Without clear governance processes to effectuate, monitor and ensure compliance, even the most detailed and specific policy or standard will likely fail.

In recent years, governance as a route to transformation has emerged as one of the most *critical drivers of change*. Governance encompasses the “hard” forms and structures (such as hierarchies, policies and procedures, budgets), and the “soft” cultures and practices (such as relationships, leadership vision, culture and identity). Governance - at multiple levels - came out strongly in this research as critical to success in taking action on external air pollution in the building construction phase. A comprehensive, multi-level approach to governance and accountability emerged as the most effective way of ensuring that governance supports delivery of policy and standards. These encompass national regulation, voluntary standards, and organisational policies.



# 3

## HEALTH EQUITY

According to the *Chief Medical Officer's Annual Report 2022*, research has found big differences in air pollution across communities, with deprived areas often the worst affected. Children, the elderly, individuals with pre-existing cardiovascular and respiratory conditions are particularly vulnerable to the effects of poor air quality.

Best practice guidance from the *Institute of Air Quality Management* encourages developers to evaluate the magnitude of dust, sensitivity of the surrounding area and sensitivity of people to the health effects of PM10. Equal weighting is given to residential areas, schools and residential care homes, and no distinction is made based on the level of vulnerability or other social and environmental drivers of health. Best practice guidance for *water stewardship*, in contrast, emphasises the importance of stakeholder engagement, including those who have a common interest. The Alliance for Water Stewardship recommends a stakeholder mapping exercise listing any water related concerns they face, and planning on-going communications with them. Especially within rapidly growing urban areas, this is an approach that could be adopted for air, introducing a management approach for air quality in the local community as a “common good”.

Businesses reporting on air pollution can use a generic approach to financially value air quality impacts - known as damage costs. This is standard practice for construction but estimates the general (average) impacts and does not take into account disadvantaged groups. To address this, there may be an opportunity to integrate local air quality data collected during planning permissions for construction with national air quality monitoring data and health surveillance data to better understand how air quality affects specific people groups, see evidence gaps above.





# 4

## PLACE-BASED APPROACHES

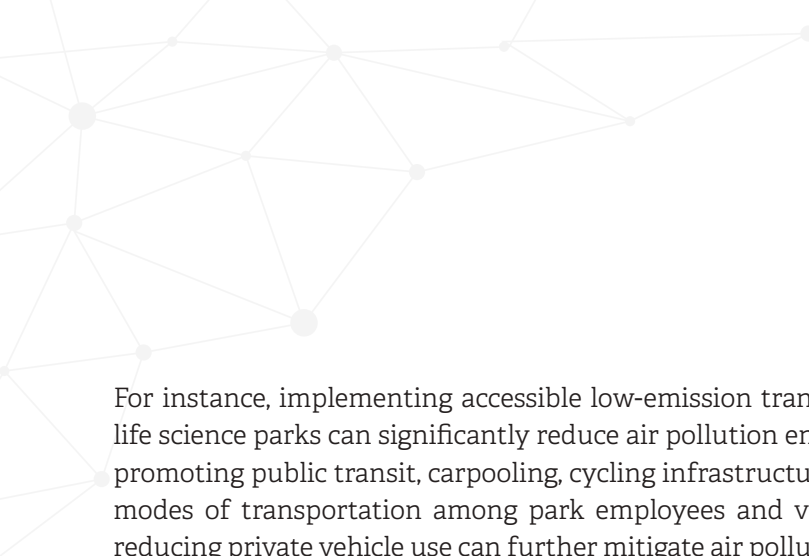
Life science parks share many similarities with cities in terms of their infrastructure, economic activity, innovation ecosystem, and that they are placed in communities. By looking to emerging trends in urban policies for inspiration and guidance, and recognising the importance of engaging the local community, life science parks can build more robust measures to reduce emissions, promote sustainability, and create healthier, more resilient environments for their stakeholders and surrounding communities.

Urban policymakers are recognizing that many of the challenges faced by cities cannot be effectively addressed through sector-focused approaches alone. There's increasing understanding of the interconnectedness of various factors that contribute to a single issue. Instead of adopting one-size-fits-all solutions, place-based approaches expand the boundaries to take into account local context to achieve more sustainable outcomes. Place-based approaches for urban areas are strategies, policies, and interventions that prioritise the unique characteristics, needs, and assets of specific urban areas to promote environmental, social, and economic sustainability.

By expanding the boundaries of governance to include a wider range of issues, policymakers can better address the underlying determinants of health and well-being in urban environments. This broader perspective acknowledges that factors such as housing, transportation, education, employment, environment, and social equity all play critical roles in shaping health outcomes.

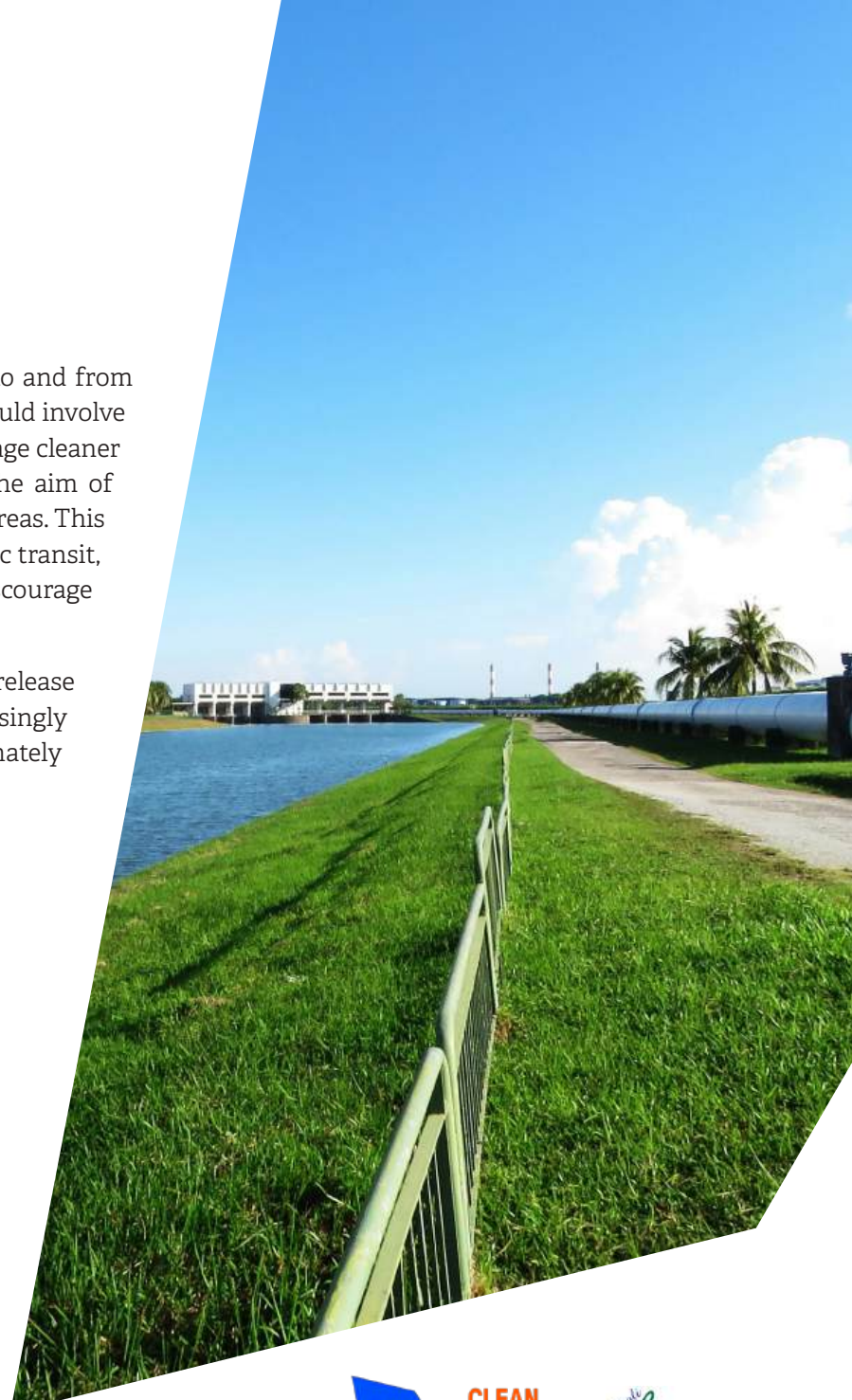






For instance, implementing accessible low-emission transportation options for people commuting to and from life science parks can significantly reduce air pollution emissions associated with daily travel. This could involve promoting public transit, carpooling, cycling infrastructure, and electric vehicle incentives to encourage cleaner modes of transportation among park employees and visitors. Designing life science parks with the aim of reducing private vehicle use can further mitigate air pollution and traffic congestion in surrounding areas. This might entail incorporating features like pedestrian-friendly infrastructure, convenient access to public transit, bike-sharing programs, and carpool lanes to incentivize alternative transportation modes and discourage reliance on single-occupancy vehicles.

Urban gardens and other nature-based solutions that can help to absorb pollutants from the air and release oxygen, thereby improving air quality. Urban gardens can also help to mitigate extreme heat, an increasingly significant health hazard due to climate change, and reduce the need for air conditioning, ultimately contributing to lower overall emissions.



# RECOMMENDATIONS

## A. OPERATIONS

### *Life Science Companies*

- Engage and develop the capability and understanding within leadership teams (Boards, C-Suites, divisional leaders) around social and environmental impact, aligned with company purpose - visionary leadership is a key enabler that flows down to tactical choice points such as adoption of ambitious voluntary standards.
- Ensure clear lines of responsibility and accountability, and associated reporting mechanisms to ensure standards on air pollution are being adhered to across company operations.
- Adopt voluntary standards - such as LEED, BREEAM and B Corps certification.
- Advocate - through public affairs teams - for national regulation in countries of operation, in order to “raise the floor” of private sector operations.
- Develop company-wide global policies to mitigate air pollution associated with building design, construction, use, and demolition. Incorporate air quality mitigation and monitoring actions within procurement criteria for contracting of developers and construction companies.
- Educate healthcare professionals, consumers and patients on the health risks of air pollution, and empower individuals and families to take action locally to improve air quality, connecting campaigns to existing national and regional strategies to promote health rather than treat disease.
- Partner with patient organisations and scientific societies to develop advocacy positions and tackle issues of health equity from poor air quality.
- Shift to decentralised operating models to ensure preventative healthcare investments address localised issues of health inequity.





## ***Construction Companies***

- Engage and develop the capability and understanding within leadership teams (Boards, C-Suites, divisional leaders) around social and environmental impact, aligned with company purpose - visionary leadership is a key enabler that flows down to tactical choice points such as advocating for ambitious voluntary standards with clients.
- Advocate for evolution in leading green building certification schemes to strengthen and mandate criteria on outdoor air pollution during construction and design.
- Ensure clear lines of responsibility and accountability, and associated reporting mechanisms to ensure standards on air pollution are being adhered to across company operations.
- Advocate - through public affairs teams - for national regulation in countries of operation, in order to “raise the floor” of private sector operations. This removes the uncertain element of whether a client will adopt voluntary standards.
- Integrate green infrastructure elements such as green roofs, living walls, urban forests, and vegetated swales into the built environment to improve air quality.
- Support policies that reduce emissions from transport including public transit and electric vehicles, and having ‘no traffic zones’.

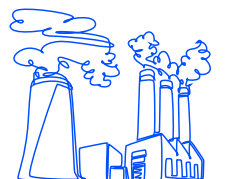
## ***NGOs and philanthropies***

- Engage with leading green building certification schemes - such as LEED and BREEAM - to strengthen and mandate criteria on outdoor air pollution during construction and design.
- Engage with B Labs (B Corp certification scheme) to influence the adoption of external air pollution indicators.
- Consider approaching existing B-Corporation companies to encourage them to “go beyond” requirements to tackle air pollution from building construction in order to set good examples and to develop case studies that can be adopted by other organisations.
- Engage with national governments to influence specific regulation on external air pollution indicators that relate to building construction.
- Consider co-funding models with life science companies to explore how air pollution from construction affects health outcomes in local families and communities exposed, and specifically in vulnerable climate exposed minority groups, see evidence gaps below.
- Expand the boundaries of policy making advocacy work to more place-based approaches that recognise specific challenges, opportunities, or priorities within a particular geographical area or community.



## B. ENABLING ENVIRONMENT

- Engaging with those organisations who are advocating for, and shaping, alternatives to GDP approaches, including the Wellbeing Alliance, and the Doughnut Economics Action Lab (DEAL): and collaborating with these to ensure that air quality indicators are integrated into emerging frameworks.
- Identifying pilots at city-level that are taking “beyond GDP” approaches, to create collaboration opportunities to ensure that air quality indicators are integrated into pilot design and evaluation. Examples include Milton Keynes and Amsterdam.
- For organisations in the UK, leveraging the UK Government Social Value Act 2021, identifying opportunities to influence the specific inclusion of air quality indicators - including in the building construction phase - in the commissioning of public services. Identifying other similar initiatives in other markets is also recommended.
- Within collaborations such as the Clean Air Alliance, identify those private sector actors who are experiencing the constraints on their ambitions to have positive social and environmental impact, caused by our global economic systems and measures, and facilitate collective advocacy. For example, in support of the Better Business Act which is aiming to shift the UK Companies Act 2006 to ensure that every business aligns their interests with those of wider society and the environment. Or, the Good Business Matters campaign, aiming to bring in a new supply chain law to hold businesses accountable for upholding human rights and protecting the environment.







## About Forum for the Future

Forum for the Future is a leading international sustainability charity with offices in the UK, US, India and Singapore. We aim to transform the way our world works. For over 25 years we have been partnering with business, government, and civil society to catalyse deep and urgent change for a more sustainable world. However, we believe greater ambition is needed to tackle today's escalating challenges. That's why we're looking beyond long-established but no longer fit-for-purpose notions of 'sustainability' and even 'net positive'. In India, Southeast Asia, the UK and Europe and the US, we are now responding to a world in crisis by accelerating the shift to a just and regenerative future – one where both people and the planet can thrive.

## About iovoli pharmaceutical consulting



iovoli pharmaceutical consulting has a mission to inspire and facilitate medical leadership at the nexus of climate, health and equity. Contributing courageous, creative and unique thought leadership on sustainable healthcare systems transformation, we passionately believe that medical leaders within the Life Science sector can be a proactive catalyst for societal change that places health in the centre.

Working with purpose driven organisations and individuals we write white papers, facilitate systems change processes, conduct research, provide strategic advice, share business-critical & future-orientated insights, dismantle siloes and provoke those we work with to think with a broader lens about what is possible.

## About Clean Air Fund

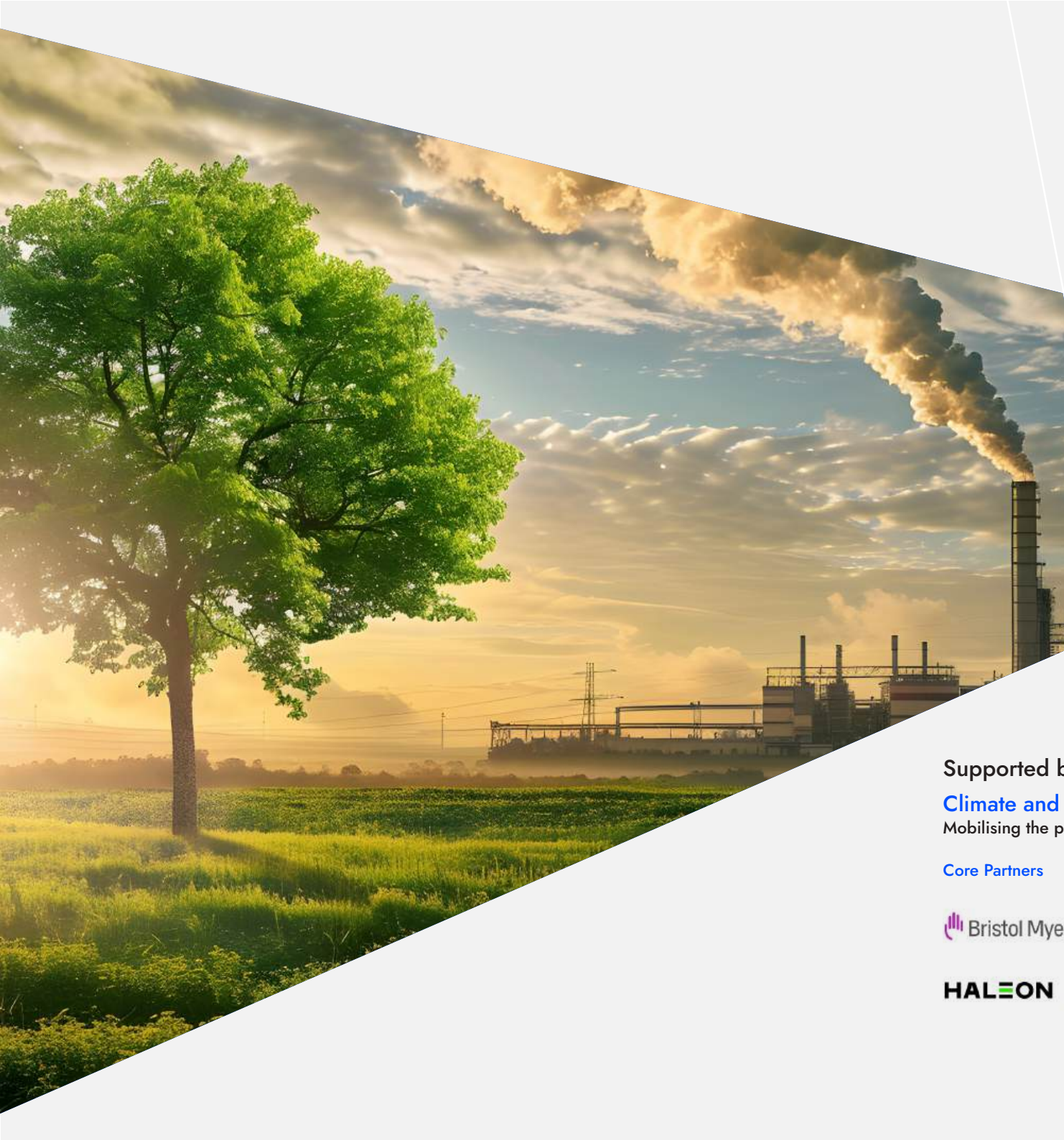


We all need clean air to live and thrive. Yet 9 out of 10 people breathe air that is harmful and dirty, making air pollution one of our biggest health threats.

Over 8 million people die every year as a result of air pollution – more than twice as many as from malaria, tuberculosis and HIV/AIDS combined.

It doesn't have to be this way.

The Clean Air Fund works around the world with governments, campaigners, researchers, funders and businesses to deliver clean air for all as fast as possible.



To learn more and explore how taking a systemic approach can contribute towards clean air, get in touch with us:

 [info@forumforthefuture.org](mailto:info@forumforthefuture.org)

 [www.forumforthefuture.org](http://www.forumforthefuture.org)

# FORUM FOR THE FUTURE

Supported by:

## Climate and Health Coalition

Mobilising the private sector to transform our health and climate systems

### Core Partners



### Supporting Partners

