

WHF Air Pollution Advocacy Strategy 2019-2021: Blue Skies Ahead for Heart Health

In response to the global recognition of air pollution as a major risk factor for non-communicable disease (NCDs) and the growing body of evidence linking it to cardiovascular disease (CVD) in particular, the World Heart Federation (WHF) has convened a high-level Air Pollution Expert Group (APEG) to foster and guide its work in this area. By *consolidating existing evidence* to make a strong case for action, *educating key target audiences* across sectors and borders, and *advocating for policies* that mitigate and limit the negative impacts of air pollution on heart health, together the ten distinguished members of the APEG will drive progress towards the overall objective of reducing the negative health outcomes caused by the effects of air pollution on the cardiovascular system.

Air Pollution and Health: A Bird's Eye View

The pollution of the planet's air, earth, and water has been universally decried for decades, and its many impacts on the environment have featured prominently in political discourse. In recent years, air pollution and its impact on people's health has become a significant issue on the global health agenda as well. Nine out of ten people worldwide breathe polluted air, which disproportionately affects those living in low-resource settings. Air pollution is a major contributor to the global burden of disease, with an estimated 9% of all deaths in 2017 attributable to outdoor and household air pollution. While the impacts of air pollution on respiratory diseases are fairly widely recognized and immediately understood, upwards of 40% of the more than 5 million deaths attributable to air pollution in 2017 are due to cardiovascular diseases. Globally, more than 20% of cardiovascular disease deaths were attributable to air pollution — more than three million deaths every year — and air pollution was the 5th highest ranking risk factor for mortality, with more attributable deaths than high LDL cholesterol, high body-mass index, physical inactivity, or alcohol use.

Just as it affects many systems of the body, air pollution requires a multi-system and multi-sectoral response. Though often overlooked, the health sector bears a significant impact of air pollution and can provide much-needed support for ministries of environment, energy, and transportation, which are traditionally responsible for mitigation efforts. The World Heart Federation is embarking on a programme of translating science into policy to influence agencies, governments and policy makers to make air pollution related heart disease a priority and to identify interventions to reduce air pollution and its impact on NCDs. To achieve our vision of heart health for everyone, we need to create a healthy environment for people and planet alike.

Zooming in on the Details

Air pollution is a complex and dynamic mixture of numerous compounds in gaseous and particle form, originating from diverse sources, subject to atmospheric transformation and varying over space and time. Three common air pollutants, particulate matter (PM), ozone and nitrogen dioxide

(NO₂), are the focus of most monitoring programs, communication efforts, health impact assessments, and regulatory efforts.

Evidence for impacts on cardiovascular disease is most consistent for PM, which is responsible for the vast majority of the disease burden via its impacts on ischemic heart disease, and stroke, as well as lung cancer, COPD, lower respiratory infections, Type 2 diabetes, pregnancy outcomes and related infant mortality. Ozone is mainly associated with exacerbation of respiratory disease, with COPD incidence and mortality and with metabolic effects. NO₂ is produced from the burning of fossil fuels and is often used as an indicator of traffic-related air pollution. There is growing evidence that chronic NO₂ exposure is associated with effects on non-accidental mortality, including cardiovascular deaths; chronic exposure to NO₂ is also associated with incident childhood asthma, while short-term variability is associated with exacerbation of asthma and increased daily mortality counts.

Defining the Scope of Work for the Air Pollution Expert Group

The complexity and scale of this issue create an unfortunate lack of understanding among those with the power to make change for good, including doctors and policymakers, which in turn results in a subsequent lack of concerted action. Indeed, political commitments and policy measures to mitigate pollution emissions will ultimately be necessary to reduce harmful exposures. Nevertheless, healthcare providers can play several important roles before and while such mitigation is achieved. WHF is ideally poised to address the low levels of acknowledgment and acceptance of the impacts of air pollution on circulatory health among cardiology societies, heart-health foundations, and institutes of medical education and their members working on the front lines of healthcare and health policymaking.

It is to this end that WHF has convened the APEG. Composed of ten distinguished air pollution and CVD experts from around the world, the APEG guides the work of the World Heart Federation in moving the dial on air pollution action for health. In addition to outlining top-level strategy, its Members represent WHF at relevant platforms, approve technical messaging for statements, and lead internal advocacy efforts towards WHF Members and Partners. Together they drive progress towards the overall objective of the workstream: reducing the negative health outcomes caused by the effects of ambient air pollution on the cardiovascular system.

Where We Stand - A SWOT Analysis of the Air Pollution Expert Group

INTERNAL	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Expertise – scientific, clinical, research, and advocacy • Ongoing own research and projects • Name recognition of some participants in relevant circles • Geographic diversity – representative of WHF Membership and global CVD community • Gender balance • Excellent rapport and commitment demonstrated by members • Connections within governments, i.e. Mongolian Ministry of Health • Strong connections to the WHO • support at Board level • Support of WHF President 	<ul style="list-style-type: none"> • Geographic diversity – can be difficult to coordinate all members for calls and/or meetings • The APEG has not yet met in person, and COVID-19 makes this unlikely in 2020 • Geographic diversity – different countries and/or regions may have differing approaches to assessing AP and its health impacts, so APEG Members may consequently differ in their own recommendations • Ongoing research/projects: members have pre-existing conflicting commitments • Questionable/limited engagement of clinicians in the political processes that determine air pollution-producing activities

EXTERNAL	Opportunities	Threats
	<ul style="list-style-type: none"> • AP high on WHO agenda • AP high on global political agenda and public interest • AP high on WHF internal agenda with support of President • Strong connections with WHO AP staff (President-level) • Build off of initial capacity-building project with WHO • Build on the joint statement with ACC, ESC, and AHA • Respond directly to questions raised in WHF Member survey • Create a roster of experts and interested parties based on responses to survey • Produce WHF-branded guidelines and policy recommendations • New global focus on distance learning due to COVID-19 • Global interest in effects of reduced levels of AP due to COVID-19 • Major international policy negotiation platforms, i.e. COP • WHO to produce “best buys” for AP as part of the new NCD 5x5 • Link with physical activity • Funding – especially from foundations (to be explored) 	<ul style="list-style-type: none"> • Lack of willingness or ability to act among cardiologists • Scale of problem – global, trans-boundary, long-term, multi-sectoral • Scope of project – risk of appearing to take on too much or too little to have a concrete impact • Lack of funding – in spite of its high-level political support, unlike other WHF projects the APEG does not currently enjoy an obvious funding hook • VUCA context – especially re: COVID-19 and falling attention to AP • Lack of concentrated interest due to global focus on COVID-19 • Impact of AP on CVD not widely appreciated and may be difficult to convey • Impact of AP on CVD is technically complex, and cardiologists are often understood to be difficult to activate • Limited training on environment and health in general in medical schools • Competing interests of industry, especially re: fossil fuels

Campaign Strategy

The overall objective of the APEG is to mobilize WHF’s Members, Partners, and resource networks to reduce the negative health outcomes caused by the effects of ambient air pollution on the cardiovascular system. This very ambitious goal cannot be achieved in one fell swoop, but by tackling a number of SMART specific objectives, real progress can be achieved in stages:

Specific Objective 1: Consolidate

The APEG knows that the link between air pollution and cardiovascular disease has been proven by extensive scientific inquiry. Unfortunately, much of the global cardiovascular community remains either unconvinced or unmoved. Clinical cardiologists focus on treatment and to a lesser degree personal-level prevention. For air pollution, treatment and personal-level prevention are not seen as relevant when compared with broader prevention at the societal level, so this initiative will ask

cardiologists to work in a new and unfamiliar way. Relevant stakeholders, especially WHF Members and Partners, must *accept that air pollution is a major environmental risk factor for CVD that can and should be addressed.*

Actions to achieve this objective include consolidating existing evidence into a WHF policy brief on air pollution and CVD, disseminating the WHO capacity-building module on air pollution and CVD, conducting webinars/workshops to roll out tools to Members, increasing social media output, and engagement at key moments in the calendar.

The objective can be measured through a post-campaign survey of WHF Members showing significant improvement across questions related to perception of air pollution and CVD, levels of support from external partners in the organization of air pollution engagements and events and social dissemination of messaging, and reports from Members of having employed WHF advocacy tools on air pollution in their own countries.

Specific Objective 2: Educate

Action will have to be accelerated at multiple levels of society to achieve meaningful progress on air pollution, so educational and communications initiatives must be extended to multiple target groups. Successful policies require the support of the public as well as those in power, so the APEG will *ensure that mitigating the health impacts of air pollution is prominent on the global health, environmental, development, and general political agendas.*

This can be achieved by WHF and/or the APEG visibly participating in high-level international fora, such as UNGA and COP, driving dialogue on air pollution as a public health priority in addition to an environmental one, and highlighting fiscal policies as a powerful solution to reduce air pollution. It will require content, speakers, and logistical support for participation in key panels, as well as science-based messaging that is understandable and effective for public consumption. On a more targeted micro-scale, WHF can produce a leaflet of key facts on air pollution and CVD for distribution in hospitals and general physician waiting rooms and seek to include environmental education in medical school curricula.

WHF has the power to reach up to 2 billion people on World Heart Day, and we can leverage this reach to raise awareness on policies to reduce air pollution, promotion of physical activity and active transport, and other achievable steps towards progress on global heart health.

Specific objective 3: Advocate

With tools in hand and the spotlight on air pollution, the APEG will work towards the third specific objective to *catalyse domestic policies limiting the major sources of air pollution and recognizing the negative impact of air pollution on health.*

Formal policies in key target countries and/or cities are an excellent way to measure constructive progress on air pollution and its health impacts. WHF will equip its Members to be able to speak with relevant policymakers (parliamentarians and ministries of the environmental, development, energy, etc.) at the national level and to individual leaders (city mayors, civil society

representatives, community activists, etc.) at the local level to make air pollution-related heart disease a priority and promote healthy cities.

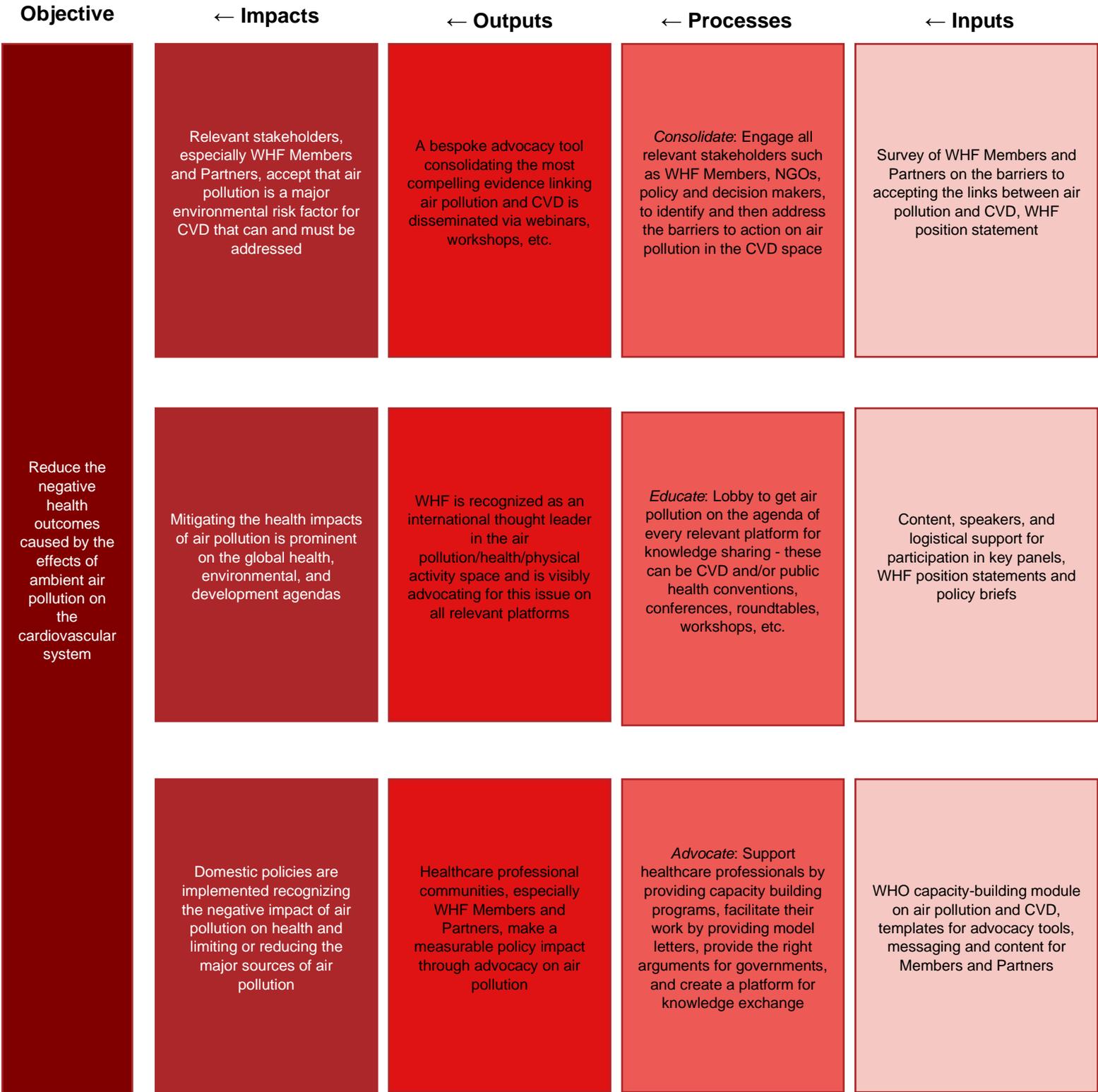
A WHF advocacy toolkit on air pollution and CVD, webinars/workshops to roll out toolkit to Members, and ongoing ad-hoc support for Member initiatives related to air pollution and CVD at the domestic level will lead to progress on this objective.

Blue Skies Ahead for Heart Health

This is an ambitious agenda, framed around a complex issue in perhaps the most challenging context of modern public health. But if the current COVID-19 crisis has taught us anything, it is that the improbable can happen, and our capacity for collaboration across sectors and borders is a massive opportunity waiting to be tapped. Air pollution has continued to feature in global discourse, and the world cannot wait for the next pandemic to clear the air. The APEG has already hit the ground running through its joint publications and collaboration with the WHO, and with the implementation of this strategy the sky is the limit for tackling air pollution as a risk factor for CVD.

Annexes

I. WHF Air Pollution Logic Framework



II. Stakeholder Mapping

Type	Key examples	Primary or secondary	Role	Activation
Cardiology societies and their members	ESC, ACC, Chinese Heart House, Cardiovascular Society of India	Primary	Advocate for policies to reduce air pollution and advise patients on ways to mitigate risk	Aware → Activate
Policy makers at the national level	Ministers of Health and Environment of key countries, such as the Netherlands and China	Primary and secondary	Enact policies to reduce air pollution	Aware → Activate
Policy makers at the local level	Mayors, municipal health departments, transportation authorities, etc. such as the WHO Healthy Cities network	Primary and secondary	Enact policies to reduce air pollution	Aware → Activate
Civil society and academic institutions	IISD, Vital Strategies, ERS, ATS, APEG Member organizations	Primary	Advocate for policies to reduce air pollution	Accept → Activate
General public	Young people interested in climate change, influencers such as Greta Thunberg	Primary and secondary	Advocate for policies to reduce air pollution	Acknowledge → Activate
Global norm-setting bodies	UN, WHO, UNEP, World Bank	Primary and secondary	Enact policies to reduce air pollution	Accept → Activate

III. Proposed Key Messages

Target audience	Key messages	Delivered by
Cardiology societies and their membership	<ul style="list-style-type: none"> A sufficient body of strong, compelling evidence exists proving the negative impact of air pollution on cardiovascular health WHF Members must take action – here’s how... 	WHF Air Pollution Expert Group
Policy makers at the national level (Ministers of Health or Environment)	<ul style="list-style-type: none"> Implementing policies to reduce or limit air pollution will improve the cardiovascular health of constituents and reduce strain on the healthcare system 	WHF Members and leaders of the global cardiovascular community
Policy makers at the local level (mayors, transportation)	<ul style="list-style-type: none"> Implementing policies to reduce or limit air pollution will improve the quality of life for local citizens and 	WHF Members and local representatives

authorities, or municipal health departments)	<p>reduce strain on municipal public services</p> <ul style="list-style-type: none"> • Virtuous cycle of healthy cities 	of the cardiovascular community
Civil society and academic institutions	<ul style="list-style-type: none"> • Only by working together across sectors and silos can we successfully advocate for the policies that will create a healthy and sustainable environment for all 	WHF Air Pollution Expert Group, WHF Members and Partners
General public	<ul style="list-style-type: none"> • Air pollution is not an issue only for national governments, Ministries of Environment, or businesses • Air pollution has impacts on all of our CV health and should be controlled by strong policies at all levels 	WHF Air Pollution Expert Group, WHF Members and Partners
Global norm-setting bodies (UN, WHO, etc.)	<ul style="list-style-type: none"> • Air pollution has health impacts across borders/sectors and must therefore be addressed with strong policies at the international level 	WHF Air Pollution Expert Group, WHF Members and Partners

IV. Sample Activity Calendar - Proposed activities over an initial three-year period:

2019

Q1 Establish the need for an Air Pollution Expert Group (APEG) to guide WHF work on air pollution and CVD, draw up draft Terms of Reference (ToRs)

Q2 Call for applications for APEG, formally invite selected applicants to join the group

Q3 Establish official ToRs, begin engaging externally with WHO and other partners where appropriate (capacity-building module, NCD Café)

Q4 Hold first teleconference with all APEG members and establish initial priorities moving forward

2020

Q1 Teleconference: Member survey, WHO module, joint statement, EU Green Deal

Q2 Teleconference: Discussing results of survey, APEG strategy, COVID response, expert roster

Q3 Development of advocacy materials and planning capacity-building exercises for Members, teleconference: preparation for roll-out

Q4 Begin rolling out capacity-building exercises and materials for Members, teleconference: planning key points of engagement in 2021

2021

Continue holding capacity-building workshops and webinars for our Members and engage in targeted advocacy towards policymakers together with our Members at key points throughout the year, i.e. UNGA, COP

V. Budget and Resource Allocation for the period 2020-2021:

1. Annual face-to-face meeting of the APEG (place TBD, around relevant high-level meeting or conference) – 20,000 CHF/year
 - a. Given the travel limitations created by the COVID-19 crisis, this can be partially redistributed the development of digital tools, videos, etc.
2. Symposium or side-event at targeted conferences or meetings (4 people travel & accommodation, print materials as necessary) – 10,000 CHF/event, 2 in 2021?
3. 1 fact sheet (production/design) – 15,000 CHF
4. Communication and dissemination tools (to be produced and discussed with the WHF Comms Team and external design partners) – 15,000 CHF
5. In-kind and in-house support (i.e. webinar tools, etc.)

TOTAL = 90,000 CHF over two years

Staff allocation:

Kelcey Armstrong-Walenczak – 30%, Florence Berteletti – 5%, WHF Comms Team – 5%

VI. Crisis Communications and Defensive Advocacy Table

Potential threat	Reaction	Messaging
Ongoing lack of buy-in from cardiologists	Engage in “deep listening” exercises to more effectively address the specific roadblocks to acceptance	<ul style="list-style-type: none"> • We can appreciate that the links between air pollution and CVD are perhaps not as obvious as those between AP and pulmonary diseases • However, these links are better established than may be generally realized – present clear, consolidated evidence from WHO, CDC/EPA, and other trusted sources • Share concrete steps that cardiologists and societies can take to counter the effects of air pollution on CVD to create a feeling of communal action and momentum
The COVID crisis may continue to take centre stage at international fora, diverting attention away from other health topics and cancelling or postponing in-person events	Increase digital outreach to Members and Partners, design engaging online tools and events, link subject to COVID where appropriate, stay on top of evolving global agenda	<ul style="list-style-type: none"> • We are united with our Members and Partners across sectors and borders to meaningfully contribute to the COVID response • While the pandemic takes its toll, people continue to suffer and die from CVD, the world’s leading cause of mortality, and exposure to air pollution • We can observe how reduced air pollution due to the lockdown has positive health impacts – let’s engage in a global dialogue on how we can build on this experience
Lack of funding	Explore potential links to pharmaceutical interventions and/or “green” for-profit enterprises	<ul style="list-style-type: none"> • Air pollution is at the top of the global SDG agenda, now is the time to make an investment • Air pollution is a major risk factor for CVD and should be treated as such, just like tobacco use or unhealthy diet (5x5 agenda)