

## Key Messages from Sessions of the 2018 Asia Pacific Clean Air Partnership Joint Forum

The Asia Pacific Clean Air Partnership Joint Forum was established in 2015 as a mechanism to promote coordination and collaboration among various clean air initiatives in the Asia and Pacific region. The proposal for establishing the Joint Forum, followed 2014 Resolution 1/7 of the first United Nations Environment Assembly on ‘Strengthening the role of the United Nations Environment Programme in promoting air quality’. Resolution 3/8 of the third United Nations Environment Assembly in 2017 on ‘Preventing and reducing air pollution to improve air quality globally’ requested the Executive Director of the United Nations Environment Programme to, inter alia, ‘support the enhancement of regional cooperation to address air pollution...in close cooperation with the Asia Pacific Clean Air Partnership, and to organize regional communities of practice for air quality management through the regional offices of the United Nations Environment Programme.’ (paragraph 7(c)).

This note lists key messages expressed during the sessions of the Joint Forum, which was organized as part of a week-long programme of the Clean Air Week on 19-23 March 2018 in Bangkok, Thailand, under the theme ‘Solutions Landscape for Clean Air’ with the following objectives:

- a) discuss and share the latest science, evidence and impacts of air pollution;
- b) share and exchange practical and innovative solutions at the national and local level, featuring policy, finance, and technology;
- c) provide progress on implementation of the 2014 UN Environment Assembly (UNEA) resolution in Asia and the Pacific on air quality including the Asia Pacific Clean Air Partnership since the 2015 Joint Forum, and
- d) develop a plan to implement the UN Environment Assembly resolutions on air quality in the region.

**Event Report** for the 2018 Asia Pacific Clean Air Partnership Joint Forum is available through this [link](#).

### Session 1: Opening (Welcome, Inaugural and Keynote Address)

#### Key messages

- Leaders of Asia and the Pacific acknowledge that the region is the epicenter of the global effort to fight air pollution. Over 80% of people globally are living in urban areas with sub-standard air quality. Some 300 million children world-wide suffer from air pollution above acceptable level. Urban air pollution in Asia are often 5-10 times above World Health Organization (WHO) guidelines.
- However, the region also has varied and proven cases of successful measures to combat air pollution. Cities in Japan and Singapore are among those that have succeeded in transforming polluted cities to clean and green cities through multiple measures including tax incentives and green loans for clean technologies and levies on polluting industries. **[Policy]**
- In recent years, multiple stakeholders across countries and cities in the region have become more aware of the harm of air pollution and have built capacity to tackle the problem, resulting in some improvement. More is still needed - across sectors and stakeholder groups, including citizens, - to

monitor air quality, to treat air pollution related illnesses, and to reduce pollutants. Local governments have a crucial role to play in generating and implementing policies and use technology, and for this, their own capacity to identify and implement solutions related to air pollution must be built including through peer-to-peer support, city-to-city exchange, applying co-benefit approaches, and green finance (e.g. credits, bond).

- **Countries and organizations in Asia Pacific region are encouraged to work together and contribute in further development of the Asia Pacific Clean Air Partnership (APCAP).**

## Session 2: Solutions for Clean Air

The panel discussion has identified readily available and practical solutions, best practices, policies and lessons learned from efforts by different stakeholders on air pollution reduction in the region and in collaboration with the Climate and Clean Air Coalition. The discussion aimed to increase understanding of the multiple benefits of reducing air pollution including the short-lived climate pollutants to address sustainable development, climate change, and economic growth, and how partnerships have effectively created conditions for cross-sectoral reductions in air pollution.

### Key messages

- There are many cost effective, practical solutions for clean air. Considerable progress has been made in many parts of Asia Pacific, but much more needs to be done to reduce the health and climate impacts of air pollution.
- The Report 'Air Pollution in Asia Pacific: Science based Solutions Solutions', developed in response to a UN Environment Assembly resolution, is a key tool available to policy makers.
- Addressing short lived climate pollutants, such as black carbon, methane ground level ozone and HFCs, needs engagement from key sectoral Ministries including energy, health, transport, industry as well as environment. Political will at the ministerial level can drive cross government cooperation.
- **[Policy]**
- More focus on indoor air pollution from household energy is also key to reducing health effects and premature. **[Policy]**
- Need to strengthen communications on air pollution through the use of simplified language (e.g. PM 2.5 not understandable) and strategic collaborations with partners that have the expertise and influence (e.g. UNICEF, local or international artists). Communication must be tailored to different audiences and built around the solutions more than the problems. **[Communication]**
- Government action is key to promote the participation of all stakeholders in providing and implementing solutions, but it may be constrained by the impression of solutions being only pilot and not proven solutions. **[Communication]**
- Stimulating action from citizens is also key to reduce air pollution **[Communication]**
- Engaging with private sector groups such as chambers of commerce or industry groups provide an entry point for mobilizing action to address pollution. **[Policy]**
- Urban government-led solutions are essential to address air pollution. **[Policy]**
- Agricultural sector solutions:
  - Need to increase access to capacity building programmes, finance and technologies for farmers to reduce burning of agricultural waste. Examples are converting rice residue to mulch through promoting the adoption of appropriate technologies and using agricultural waste for biomass power generation. **[Technology]**
  - Need awareness-raising in agricultural communities on the impacts of burning on health. **[Communication]**
- Industrial sector specific solutions:

- Developing and strengthening emissions regulations and emission limits can ensure industry invests in pollution reduction technologies.
- Need to strengthen the enforcement of emission limits including building capacity of local authorities to measure emissions and reducing corruption related to payments to avoid emission limits. **[Policy]**
- Need to increase awareness on the impact of industrial pollution on human health in local communities. **[Communication]**
- Solutions related to Brick-making:
  - Case study on engaging with private sector to address pollution in Nepal: Earthquake in Nepal provided an opportunity to rebuild brick making kilns to make them cleaner. A kiln design manual was prepared with support from ICIMOD. The new design reduced pollution, were more energy efficient and earthquake resistant. Nine initial entrepreneurs- ‘champions’- built these new kilns with their own funds and this demonstrated their effectiveness. Bricks produced were of higher quality than old kilns. Peer to peer talk encouraged more to adopt the modified technology. **[Technology]**
  - Case study Bangladesh: Brick Kiln Law in 2013 banned kilns in city areas and encouraged adoption of new kiln technology. This significantly reduced pollution from kilns. **[Policy]**
- Transport sector solutions:
  - Need to develop vehicle emissions standards relevant at country level. Key areas for action are strengthening political will, governance structures and financing. **[Policy]**
  - Alternative transport options should also be developed and scaled up including buses, rail, bike and walk ways. **[Policy]**
- Child health and pollution solutions:
  - Case study from Mongolia: Action is underway to introduce cleaner and more energy efficient heating and cooking solutions. In addition, focus on reducing exposure to air pollution at schools and kindergartens through more indoor air pollution monitoring and by improving overall health of children to be more resistant to impact of pollution. Another focus is on strengthening air quality monitoring systems at city level and translating air quality data- e.g. PM2.5- into more easily understandable language. Government is also piloting more energy efficient kindergarten facilities.
- Waste management sector solutions:
  - Improving waste management capacity at city level is essential
  - Need to ensure that waste sector is considered in broader discussions on action to address air pollution as its often overlooked as a sector. **[Policy]**
  - Stop open-burning of organic waste by scaling up action to convert organic matter into compost and biogas.
  - Act to reduce waste through awareness raising campaigns e.g. focused on reducing food waste. **[Communication]**
  - Locally developed and tailored waste management technologies are key e.g. Maldives has machine for converting glass waste into sand for construction. **[Technology]**

### Session 3: Combating air pollution – Policy perspectives on solutions

#### Objectives

The Ministers and senior government representatives discussed innovative policies to promote partnerships, financing, and technology towards achieving the Sustainable Development Goals and UN Environment Assembly Resolutions on Air Quality.

## Key messages

- **The knowledge sharing and dialogue platform provided by the APCAP Joint Forum is very timely as governments in the region are stepping up their commitment and action to tackle air pollution.** The public of Asia and the Pacific are increasingly demanding that governments address air pollution.
- Need to ensure that action on pollution focuses on all key sectors; currently there is a large focus on transport sector. Transboundary nature of air pollution, for example, open-burning of fields and waste across borders, must be recognized. **[Policy]**
- Economic leap seen in the region pose additional challenges to the governments in fighting air pollution, due to related industrialization and to population growth. **[Policy]**
- Using a co-benefit approach to tackle air pollution and climate change together is effective in yielding good outcomes. In addition, policy mix such as setting law regulations, promoting voluntary efforts, preparing financial supports is necessary in the successful implementation of solutions. **[Policy] [Finance]**
- More technical officers and experts are needed in governments to support the implementation of solutions.
- Continued awareness-raising is necessary to inform and encourage the private sector in investing in cleaner technologies. **[Communication]**
- Incentives for local governments to implement air quality policies must exist and be made known. **[Policy] [Communication]**
- Improving air quality by addressing opportunities for quick wins needs to be anchored on enforcement. Action by all stakeholders is important, not only by the national government agencies.
- Major air pollution sources highlighted by ministers were:
  - Open burning of waste;
  - Diesel power generation;
  - Biomass burning, including those for cooking and heating, causing emission of black carbon;
  - Dusts from construction and demolition sites;
  - Land development including agricultural clearing and slash-burn;
  - Vehicular emissions especially those with diesel fuel;
  - Point pollution sources such as power plants, industrial boilers, steel production plants, stone crushing sites, etc.
- Solutions highlighted by ministers were:
  - Development plans that take into account air quality policy needs and with financial mechanisms for implementation; **[Policy]**
  - Establishing targets for renewable energy's contribution to national energy; **[Science]**
  - Improvement of air quality standards, continuous air quality monitoring and real-time sharing of air quality data; **[Science] [Communication]**
  - Health Impact Assessments; **[Science]**
  - Introduction of cleaner fuels standards for transport such as Euro 4;
  - Cleaner technologies for most polluting industries and sensors for industrial emission sources; **[Technology]**
  - Expansion of use of clean cooking stoves;
  - Modern waste management facilities and efforts to reduce waste overall;
  - Solutions that fit for locations (e.g. mountainous countries, island states) and extreme climatic conditions.
  - **Networking through regional and sub regional platforms such as APCAP;**

- Effort to secure highest possible level of political commitments to address air pollution with policy mix that targets priority sectors. **[Policy]**. In case of transport sector, the mix could include:
  - Modernization of public vehicles (e.g. electrical Jeepneys in the Philippines)
  - Introduction of mass public transportation that is affordable and accessible;
  - Rigorous and transparent vehicular emission testing;
  - Taxation on older vehicles;
  - Import duty for second hand vehicles;
- India invited stakeholders to join in the celebration of the World Environment Day on 5<sup>th</sup> June 2018 which has the theme of plastic pollution

## Session 4: Inspiring action by local government and citizens for clean air

### Objectives

Leading cities from the Asia Pacific region shared their initiatives and solutions in improving urban air quality in their cities. They identified support needed from different stakeholders to accelerate action at the city level. The session also highlighted outcomes from the 9th World Urban Forum, which discussed implementation of the New Urban Agenda, and how clean air solutions can support in achieving the New Urban Agenda and the Sustainable Development Goals.

### Key messages

- Cities in the region are already taking concrete action to address air pollution. Cities and urban centers need support and partnerships to make existing initiatives into transformational programmes that would holistically and impactfully improve urban air quality.
- For air quality policies and programs to be effective, they need to be integrated across different areas of work of the city - whether through transport planning, waste management, climate change mitigation or resilience building. This means embedding initiatives within broader development or city strategic plans.
- There is a need to further develop and strengthen the narrative in terms of how air quality programs can address other urban issues and Sustainable Development Goals, including carbon reduction, creating livable cities, addressing poverty and equity issues, among others. Identifying co-benefits from specific actions becomes an important aspect of discussions on identification and implementation of programs.
- A comprehensive plan to tackle air pollution from multiple angles and sectors has worked in the case of Toyama, Japan. It is recommended that air quality policies, initiatives and objectives are part of medium (up to 3 year) to long-term (up to 10 year) city development or sustainability plans. The longer planning horizons support better integration of efforts and activities. **[Policy]**
- Cities should link their air quality and climate policies with national and global development strategies, such as SDGs and The Sendai Framework for Disaster Risk Reduction 2015-2030. **[Policy]**
- Long-term plans for development with policies on air quality must be communicated to the citizens and the pollution sources such as factories so that they can readily support the implementation. **[Communication]**
- Partnerships between the local government, the business sector and the civil society groups are necessary to develop, fund and implement air quality policies.
- City leaders are targeting mobile air pollution sources (e.g. cleaner fuels, traffic control), to improve air quality monitoring, and to reduce health risks of vulnerable groups (e.g. school based actions in Ulaanbaatar).

- Since the 1980s, Beijing has implemented a number of measures to control road dust and factory emissions. In cities in China, such as Beijing and Jinan City, measures that worked include: switch-over of energy and heating source from coal to natural gas; elimination of coal-based industrial boilers, and relocation of older factories to outside of city limits. The cities plan to use big data to further develop and address air pollution.
- To reduce air pollution, it is crucial to engage with primary emitters and agree on reduction targets.
- **Fora such as APCAP could be a channel to highlight and share technologies.**
- Local governments collaboration with universities and research institutions, in the collection and analysis of localized air pollution measurements, is fundamental so that the policy development and implementation are finetuned and well-targeted to reduce the pollution. **[Science]**
- City associations are key in terms of knowledge sharing and helping facilitate peer to peer learning and sharing of knowledge products. City Associations are very relevant in promoting city-to-city collaboration. They can also urge local governments to measure air quality, plan interventions, and act urgently to improve air quality.
- Infrastructure development (e.g. mass transport), incentives to reduce pollution, and placement of technical officers in local governments are essential to improve air quality. **[Policy]**
- Bench marking of air quality and air quality actions between cities could be helpful in motivating them to achieve better air quality. **[Communication]**
- Lack of localized data and information, including about the co-benefits of addressing air quality, are missing. The narrative around the co-benefits needs to be developed further so that air quality actions are seen as an investment and not as an expense. Behavioral change of citizens is key and can be triggered through a combination of policies and actions including promoting accessibility and economic viability of, for example, public transport. **[Communication], [Policy]**

## Session 5: Innovating financing, technology, and regulatory frameworks for improving air quality

### Objectives

This session provided a platform to present and discuss technology, regulatory frameworks, and financing instruments needed to drive public and private investment to achieve clean air. Panelists spoke of innovative solutions on utilizing public and private investment, international climate finance, and support from development banks to support projects and investments to improve air quality.

### Key messages

- The private sector is ready to invest, provided that the risk return profile is sufficiently attractive. In cases where the risk exists, it is important that financial institutions, multilateral, national or even commercial banks come in and provide the concessional finance, the grant, the equity funding that is required to help reduce the risk. **[Finance]**
- Financing will generate limited impact if there is lack of enabling factors such as government will, technical capacity, and ability to leverage co-financing from private sector, local financing entities, others. **[Finance]**
- Financing large, “policy-based” loans for supporting green SMEs development, district heating, etc., requires strong political and business sector commitments in the beneficiary country/ city. The governments must create conditions that will reduce risks for investors using measures such as extended payment plan, subsidy. **[Policy]**

- There is a need to have more projects which are bankable and ready for investment. This highlights the importance of funding for proper packaging of projects and for feasibility studies to ensure that these projects are financially attractive.
- Switch-over to new clean technologies and industries can cause some job losses, job transformation and job gains. A just transition is needed when jobs are lost, and social welfare measures will need to be activated, and we must build the skills needed to facilitate employability of those human resources to green and quality jobs. The International Labour Organization (ILO) estimates that 14 million new green and quality jobs could be created by 2030 in sectors contributing to clean air such as clean energy and transport if the governments invest in mitigation policies and education / capacity-building of their work force. **[Policy]**
- As shown in the case of Tropical Landscape Finance Facility, unbiased entities like UN Environment, with its clear interest and priorities in social and environmental impacts, have great convening power and can bring together the right partners who can share the risks related to the investment. **[Finance]**
- Development banks such as the Asian Development Bank (ADB) have a role where local commercial banks are not yet ready for investment in clean and more sophisticated technology (e.g. introduction of solar power in Thailand). **[Technology]**
- Development banks can provide soft financing which is important in the initial years of private sector investment where the economies of scale are not yet there and the prices are too high to have sufficiently quick payback period for the private sector to invest. **[Finance]**
- Emerging economies in the region are starting to supply clean technology equipment and services to countries such as Japan and Singapore. **[Technology]**
- In countries where the status-quo development is booming such as India, it is challenging to attract businesses with modern and unconventional technologies. **[Technology]**
- The governments must strive to have solid data on its industries and sectors (e.g. energy utility) so that financing models such as an energy savings performance contract (ESPC) where an Energy Services Company (ESCO) achieves energy savings at a property or portfolio of properties as a service. **[Science]**
- Among businesses and projects showcased were:
  - Massive Fund, India, providing funding for innovative ideas that disrupt status-quo.
  - Thai Solar Energy Public Company working with the government to increase renewable portion of Thailand energy mix.
  - Mobike with dock-less model which is being improved with manual collection of bikes and promotion of bike highways with the governments.
  - C-Balance, India, promoting “Fair conditioning”.
  - First One Mile Mobility, Japan, with a Euro L class compact EV with battery cloud and micro hub with only 1,600 parts.
  - Clarity Movement Co., USA, with a low-cost PM 2.5 sensor to increase the resolution of air quality monitoring data collection.

## **Session 6: Empowering consumers and citizens to become advocates – mobilizing citizen action**

### **Objectives**

This session was set to discuss and showcase powerful interventions that inspire citizens on individual and collective action to improve air quality. The session also presented the BreatheLife campaign and showcase the interventions undertaken by various groups including youth and women’s groups, civil society, to reduce air pollution.

## Key messages

- If we want to see and accelerate change, it is important to broaden the base of partners. For that multiplier impact, we need to build new constituencies and empower them.
- There is rich experience of civil society actors across the region who are trying to bring development decisions and public participation together. This is clearly a trajectory that needs further support to influence change.
- Joining the BreatheLife campaign can be a global and national demonstration of governmental commitment to reduce air pollution. In case of Mongolia, the campaign has been useful in bringing national government and other stakeholders together for developing and implementing the air quality policies with localized actions with public support. Mongolia's Minister just launched a Green Passport for Youth to help mobilize change in behavior to reduce pollution and challenged all countries to do so.
- Public awareness and interest on air pollution has increased significantly across the region since 1990s. **[Communication]**
- Individual action is essential (e.g. citizen science for air quality monitoring). The society must come together to fight air pollution.
- It is crucial for the public to be informed on the issue since they are part of the solutions, such as when they have to undergo lifestyle changes to combat air pollution. **[Communication]**
- The development decisions (e.g. city planning) are usually done without sufficient public engagement.
- Solutions seem to be very complex to the public therefore not getting enough public support.
- Influential celebrities, opinion-makers and the creative community have an important role to play to influence public opinion and more importantly, to create and make compelling case for sustainable lifestyle changes. While celebrities are not the conventional actors on air pollution work, with their good exposure to the importance of the issue and based on their personal experience and passion, they can use their outreach and connections to empower consumers and citizens to become advocates. **[Communication]**
- Children / Youth are relatively more affected by poor air quality - they are change-makers with whom air quality policies need to connect to make changes happen. U-Report supported by UNICEF shows that the youth already have good understanding of air pollution sources such as traffic and open-burning. **[Communications]**
- As demonstrated by RASAI, India, the Mobility category winner of the Asia Pacific Low Carbon Lifestyle Challenge, start-ups have important roles to play in promoting cleaner technologies and industries. **[Technology]**
- More research into the health impacts of air pollution is necessary to equip medical practitioners with updated and clear information on how to protect the health of the public and convey the same to a greater audience. **[Science][Communication]**

## Session 7: Working together against air pollution – Partnerships and cooperation

### Objectives

This panel discussion sought solutions to optimize synergy between networks and initiatives working to improve air quality in the Asia Pacific region. The panelists shared their view and experience in working together with other networks and initiatives and explored the challenges and opportunities for collective actions to further strengthen impact of partnerships. They concluded that their combined strength can be aligned to help implement the UN Environment Assembly resolutions on air quality, and report on progress.

## Key messages

- Existing air pollution related international platforms and intergovernmental mechanisms support collaborations within and between regions and offer opportunities for exchange of experiences and information (e.g. the Acid Deposition Monitoring Network in East Asia [EANET] supported by the United Nations Environment Programme, the Convention on Long-Range Transboundary Air Pollution supported by the United Nations Economic Commission for Europe, the Global Atmospheric Watch supported by the World Meteorological Organization [WMO]) and the global Climate and Clean Air Coalition focusing on scaled-up solutions and capacities to reduce short-lived climate pollutants).

### **[Policy]**

- PM2.5 monitoring, black carbon inventory, and down-scaling of global forecasting to country-level, are increasingly covered by some of these networks. **[Technology]**
- The Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia (Malé Declaration), supported by South Asia Co-Operative Environment Programme (SACEP) and Asian Institute of Technology (AIT), continues its effort to build capacity through multiple centres.
- The mandates of the existing international platforms and initiatives are complementary and offer opportunities for further synergies among them. **[Policy]**
- After a decade since Asia Co-benefit Partnership was launched in 2010 at a meeting at the Better Air Quality Conference of Clean Air Asia in Singapore, the concept of co-benefit has gained acceptance among air quality practitioners in the region. The concept of maximum-benefits is a potential expansion of the co-benefits discussion.
- Natural sources of PMs such as sand and dust storm and wildfire are significant for Asia and the Pacific.
- Work of the Thematic Working Group on Air Quality and Health of the Asia Pacific Regional Forum on Health and Environment, chaired currently by the Republic of Korea and Thailand, demonstrates the importance of inter-agency effort to reduce air pollution and associated public health risk. Agriculture agencies also needs to be brought into air quality work.
- There was a significant discussion and agreement that the role of monitoring, enforcement and compliance in reducing air pollution is becoming even more important, , and can build on experiences from the Asian Environmental Compliance and Enforcement Network. Many countries have relevant laws, regulations and standards but these may be ineffective if they are not complied with or enforced. Also, engagement of law makers, civil society and parliamentarians is crucial in advancing on enforcement of air pollution control. **[Policy]**
- Asian Environmental Compliance and Enforcement Network (AECEN) provides a community of practice for enforcement officials to share concerns and best practices on relevant topics relating to EIA, and environmental enforcement and compliance. AECEN is also beginning to work with Climate Change Asia to look at incorporating EIA into climate change adaptation and mitigation looking into capturing co-benefits of climate change work on improvement of air pollution control. **[Capacity Building]**
- Integrated Programme for Better Air Quality in Asia (IBAQ Programme) coordinated by Clean Air Asia was highlighted as a regional initiative which supports city level action. While NGOs and Civil Society groups are not responsible for enforcement, it would be potentially helpful to join hands with the governments to ensure compliance of air quality laws and regulations.
- Communication is a strategic element in the whole process of reducing air pollution, not only as an add-on to the final result of the process. There is also a need to build the understanding of communicators on their responsibility to communicate and raise awareness not only on the final results and outcomes of initiatives. It is recognized that communication work has raised the profile of the air quality issue in the region and among various stakeholders. **[Communication]**

- Low cost sensors are adequate for trend monitoring and help in increasing the coverage of basic air quality data collection. Technology evolution of this sector will continue in coming years.  
**[Technology]**
- Collaboration between the climate and air quality communities with integrated inventories and scenarios will help policy makers define and act on a ‘maximum benefits pathway’ using existing tools supported by the Climate and Clean Air Coalition’s partners as essential to help policy makers.  
**[Policy]**
- **It is recommended for all these platforms to work together, build on each strength and establish a common agenda or plan under APCAP to increase knowledge sharing and that APCAP establishes a quality assurance programme to increase the common approaches and results of air quality monitoring and data that is fit for regulatory action.**