



Integrating Clean Air, Climate, and Health Policies in the COVID-19 Era

The Role of Co-benefits and the Triple R Framework

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The Asian Co-benefits Partnership is an inter-institutional platform involving various stakeholders working on co-benefits in Asia, including government agencies, international development organizations, academe, civil society and the private sector. The platform supports the mainstreaming of co-benefits into sectoral development plans, policies and projects in Asia.

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KEY MESSAGES

- A reason COVID-19 has had such far-reaching impacts is it stems from multiple interconnected risks. The difficulties that policymakers face in managing related risks not only deepen vulnerabilities to COVID-19 but other planetary crises.
- Explicitly recognizing and acting to achieve the co-benefits of integrated air pollution, climate change, and health policies in the wake of COVID-19 can help policymakers address an air pollution-climate-health crisis.
- This brief outlines how the 'Triple R framework'—**Response, Recovery and Redesign**—can help align different government agency and other stakeholder interests behind the kind of integrated clean air, climate, and health policies that can deliver co-benefits.
- The framework calls for bringing together 1) immediate **responses**; 2) broader **recovery** policies backed by stimulus funding, and 3) forward-looking **redesigns** of infrastructures and institutions.
- Regional and international organizations could help policymakers achieve co-benefits by demonstrating the application of the 'Triple R framework in diverse contexts.

INTRODUCTION

As of early 2021, COVID-19 has resulted in more than two million deaths globally, an economic downturn rivalling the great depression, and countless other signs of suffering and loss (World Bank, 2021). A reason that COVID-19 has had such far-reaching impacts is it stems from multiple interconnected risks. The difficulties that many policymakers face anticipating and managing related risks may not only give rise to COVID-19 but other planetary crises (Rockström, et al., 2009). A set of planetary crises that could prove as disruptive as COVID-19 involves air pollution, climate change, and public health. A failure to integrate air pollution, climate change, and health concerns in relevant policies is exposing the planet to another cascading set of risks.

Fortunately, COVID-19 may also enable policymakers to employ a decision making framework that would prevent such an outcome. This is partly because lockdowns and slowdowns associated with the pandemic have led to reductions in some air pollutants (notably NO₂) and carbon dioxide (CO₂) (Selvam, et al., 2020; Baldasano, 2020; Le Quéré, et al., 2020; Myllyvirta, 2020). It is also because, even as air pollution and some greenhouse gases (GHGs) such as CO₂ levels have rebounded in some locations (and, in the case of CO₂, even exceeding pre-pandemic emissions) (Zheng, et al., 2020), evidence of improved air quality could increase public demand for clean air and embolden policymakers to sustainably curb emissions with virtuous carryover effects on health and climate. Finally, it is because COVID-19 has led policymakers to adopt ambitious responses to the pandemic's immediate health impacts and allocate from 12 to 15 trillion dollars in funding globally that could underwrite a green recovery as well as redesign the unsustainable socioeconomic systems locking in emissions-intensive development (OECD, 2020). A critical question facing policymakers is whether they can integrate decisions needed to maximize co-benefits in the near-term COVID-19 response while sustaining a longer-term break from emissions-intensive developmental patterns.

The purpose of this brief is to offer policymakers such an integrative framework for their decisions. The brief argues that policymakers should aim to achieve the co-benefits of improved health, cleaner air and a stable climate in decisions related to COVID-19. Explicitly recognizing these co-benefits will help capture synergies while managing trade-offs between issues operating at different temporal and spatial scales. The brief argues that recognizing and acting to achieve co-benefits will help hold together decisions in the Triple R framework—referring to the COVID-19 Response, Recovery, and Redesign—that aims to bring about integrated solutions to related policy concerns. The framework calls for policymakers to bring together 1) immediate responses; 2) broader recovery policies (including subsidy reforms) backed by stimulus funding; and 3) forward-looking redesigns of infrastructures and institutions to align interests behind the bold and transformative change (Zusman, et al., 2020).

The brief is divided into four sections. The next section describes the linkages between COVID-19 and air pollution, climate change and health. The third section outlines how the Triple R framework could help align interests behind an integrated set of changes to air pollution, climate and health policies. A final section underlines the roles that international and regional organizations can play in supporting the brief's recommendations.

ROLE OF CO-BENEFITS IN INTEGRATING POLICIES

The concept of co-benefits was conceived nearly three decades ago when researchers recognized many of the reforms required to halt a warming climate improved air quality and public health (Ayres & Walter, 1991). These additional air quality and health “co-

benefits” were important because they could offset climate mitigation costs. They were also notable because, unlike what were historically viewed as global and long-term climate benefits, health co-benefits were local and near-term. The difference in the temporal and spatial scales made these benefits more appealing to decision-makers than policies addressing chiefly a global, long-term climate problem (Pearce, 2000).

Research has moved in several useful directions since the early insights on co-benefits helped reframe policy debates over the benefits of climate mitigation. One such direction involves the recognition of different entry points for achieving co-benefits beyond climate-first mitigation policies (i.e. carbon tax or emissions trading scheme); achieving multiple benefits was possible by working through integrated energy, transport, and air pollution as well as climate policies. This more expansive view suggests not only more actions leading to co-benefits but a more diverse collection of benefits. A related advance involves the realization that some policies can improve air quality and health but exacerbate climate change and vice versa—for instance, end-of-the-pipe pollution control technologies could increase energy use and CO₂, whereas shifting from fossil fuels to utility-scale bioenergy will increase air pollution (Williams, et al., 2018; Takemura, 2020). It was therefore critical to look carefully for not only synergies but also manage possible trade-offs over time and space in a range of different policy decisions.

This synergies and trade-offs logic is also helpful in developing an integrated set of solutions to air pollution and health in the COVID-19 era. A useful starting point is a linkage between air quality and COVID-19’s health impacts. The health impacts of COVID-19—which is after all a respiratory disease—have been most acute for the elderly and those with underlying health conditions; exposure to air pollution is a well-known cause of various types of illness as well as premature death (Kampa & Castanas, 2008). The effects of COVID-19 have therefore been greater in more polluted parts of the United States, Italy, and India (European Society of Cardiology, 2020; Pozzer, et al., 2020; Magazzino, et al., 2020). Though more cross-regional and longer term research is needed to evaluate these results, the early evidence suggests pollution exposure could worsen the severity of the virus and multiply relevant risks (Narain, 2020).

The other link between COVID-19 and air pollution involves how changes in economic activities and lifestyles affected air pollution and GHGs that cause climate change. In this case, research has shown that the reductions in fossil fuel-related energy use, particularly in the transport sector, has led to significant drops in NO₂ concentrations in cities (in Europe, China, India, US, etc.) (Yao, et al., 2020; Shrestha, et al., 2020). Meanwhile, other studies have found urban air quality improved in countries ranging from India, Mongolia, China, France and Austria (Selvam, et al., 2020; Baldasano, 2020). Mirroring this research, as work travel and other activities that rely on motorized transport fell, energy-related CO₂ has also decreased (Le Quéré, et al., 2020; Myllyvirta, 2020). Importantly, many of the changes in fossil use could improve air quality: the International Energy Association

(IEA) has noted that clean energy programmes promoted in the wake of COVID-19 cannot only reduce GHGs but also air pollution (IEA 2020).

Yet, the impacts of COVID-19 have not been uniformly beneficial for air quality, climate and health for a few reasons. The first is that the COVID-19 related reductions have tended to be more modest and less clear for health-damaging fine particulates (PM_{2.5}) and ozone. This is due to the limited effects of the changes in activities and lifestyles on some emission sources (households, power generation, agricultural activities) as well as chemical and physical processes in the atmosphere that form secondary particles and ozone (Narain, 2020; Le Quéré, et al., 2020; Briz-Redón, et al., 2020). For example, an increase in ozone concentration was observed in European and Chinese cities during the COVID-19 pandemic due to these processes (Sicard, et al., 2020). Another reason for concern is evidence suggesting a resumption of economic activities has led to a rebound in air pollution and CO₂ (Zheng, et al., 2020). The obvious questions are how can those vulnerable populations be protected and how can reductions be sustainably maintained moving forward?

THE TRIPLE R FRAMEWORK AND ALIGNING CLEAN AIR, CLIMATE AND HEALTH POLICIES

The answer to both of these questions involves moving from linkages across issues to aligning stakeholder interests. To strengthen the alignment of interests, the Institute for Global Environmental Strategies (IGES) has developed a Triple R Framework. The framework calls for integrating COVID-19 decisions involving targeted responses; forward-looking recovery policies backed by stimulus funds; and even longer lasting redesigns of infrastructure and institutions (Mori, et al., 2020; Zusman, et al., 2020). Much like co-benefits, the Triple R framework aims to help policymakers connect issues operating at different spatial and temporal scales. Yet it moves beyond the linkages (highlighted by co-benefits) by providing concrete suggestions on how policy decisions can appeal to a government agency, business, and other stakeholders with divergent interests. The following section details how this framework could be used to move from linking issues to aligning interests behind integrated air pollution, climate change, and health policies.

Response

During the spread of COVID-19, governments are justifiably motivated to protect public health. It is important to recognize in the wake of COVID-19 that efforts to protect health could safeguard populations from air pollution. Thus, governments—especially local health, environmental, transport and other sectoral departments—would be well-advised to make additional efforts to support people in polluted communities. This could involve, for instance, concerted efforts from local governments to support telework,

provide appropriate masks as well as targeted financial support for lost income in heavily polluted communities. It should also include interventions intended to bring down emissions of primary PM_{2.5}, precursors of secondary PM_{2.5} and ozone that have not fallen during the COVID-related changes to the economy and lifestyles. A commendable example that began before COVID is the Government of India's efforts to provide free access to LPG cylinders for cooking to women in poor households.

Recovery

These initial responses should feed into the larger recovery efforts to protect the health, clean the air, and stabilize the climate. Governments can ensure recovery packages target investments in clean air and energy toward this end. For instance, Japan has established a fund to support innovative technology developments aimed at achieving carbon neutrality in the wake of COVID-19 that could also yield air quality and health benefits (Kihara & Kajimoto, 2020). Explicitly recognizing the health and air pollution benefits of funds¹ allocated from stimulus packages could help strengthen funding decisions and accelerate the much-needed clean energy transition (Slezak, 2017). A fuller understanding of these multiple benefits will also help advance efforts to reign in perverse subsidies for fossil fuel industries.

A comparable set of changes may also apply to climate finance. Demands for climate finance are likely to grow sharply in the years to come--some studies "estimate investment required to achieve the low-carbon transition range from USD 1.6 trillion to USD 3.8 trillion annually between 2016 and 2050" (Buchner, et al., 2019). There is also likely to be an effort to reduce these outlays, especially as governments seek to restart their economies. Foreign assistance budgets will also likely have a sharper focus on immediate health and economic needs. However, a concerted effort to demonstrate the air quality and health benefits of these investments will bring more investment to clean air and energy. Countries, therefore, may want to follow countries such as Ghana and Mexico in integrating air quality and health benefits into their nationally determined contributions (NDCs) (Zusman, et al., 2018); and assessing these benefits in climate finance mechanisms such as the Green Climate Fund may also be desirable to retain momentum on climate change (Asian Co-benefits Partnership, 2020).

Redesign

The third element of country COVID-19 strategies involves the redesign of the systems and structures that lock-in emissions-intensive development. The term "system" has more than one meaning in this context. From one perspective, systems refer to the

¹ Though not the focus on this brief, analysing these kinds of co-benefits requires robust data on how a policy or technology will impact greenhouse gases and air pollutant emissions. Governments can incentivize data collection by requiring implementers monitor and report on all emissions.

hardware and infrastructures that encourage carbon- and pollution-intensive- lifestyle, for example, road building programmes that place a premium on motorized transport. There are also similar hardware and infrastructures that reinforce reliance on fossil fuels. A concerted effort is needed to dismantle production and consumption systems that limit low emissions alternatives.

Some of these systems are also likely to be less visible than roads and infrastructure. For example, building bike lanes will need to be complemented by not only provisions of street lights but new zoning rules and parking policies that could help maintain a resurgence in cycling witnessed in many parts of Europe during the implementation of lockdown measures (BBC, 2020). By the same token, shifts to renewables will need to be accompanied by not only solar panels but new approaches to energy billing and awareness raising on the multiple benefits of low emissions energy, including in-home displays (Faruqui, et al., 2010).

Perhaps the least visible but critical redesign element involves institutions. In some of the above cases, processes and institutions working on one issue in an isolated manner as opposed to multiple issues in an integrated manner contribute to unsustainable policies. This siloed perspective has permeated the way governments and other stakeholders think and act. For this brief's recommendations to gain traction, bridging sometimes divergent policy agendas is essential. For example, Ministries of Environment could reorganize their air and climate divisions so they sit under a single atmospheric pollution division. Other possible institutional changes involve tagging budgets so that health, air quality, and climate benefits of policies and programmes are made more visible. The seconding of staff across agencies or departments with these related remits is yet another sensible way forward.

SUPPORT FROM INTERNATIONAL AND REGIONAL ORGANIZATIONS

This brief has argued that COVID-19 has revealed important links between health, air pollution and climate change. As governments plan for a post-pandemic future, it is critical that they do not lose sight of these interrelationships. Co-benefits can serve as a useful frame to connect these issues, while the Triple R Framework aligns interests.

Though much of the brief has focused on national and local governments, global and regional institutions also have crucially important roles to play in advancing the brief's recommendations. For example, the Climate and Clean Air Coalition could take forward some of the recommendations because it works with governments to build their capacity to generate integrated air quality and climate data and assessments of co-benefits to support decision-making. Moreover, the Asia Pacific Clean Air Partnership (APCAP) established by the United Nations Environment Programme's Regional Office for Asia and

the Pacific is developing a solution tracker that can highlight the progress different countries have made with solutions to air pollution with impacts on health and climate change. Similarly motivated peer-learning efforts to demonstrate and motivate the inclusion of co-benefits into health, air pollution and climate change policies could also be initiated for cities—for example, encouraging cities to present the co-benefits of their low carbon programmes may also be supported by regional and global initiatives active in these spaces. The vertical integration between these national and local efforts may also be featured on regional and global platforms to share lessons on issues on multi-objective fiscal transfers. These proposals would again be reinforced by recognizing and rewarding co-benefits in climate finance mechanisms and NDC support programmes.

The above reforms will also gain momentum if they are linked to the 2030 Agenda on Sustainable Development and its Sustainable Development Goals (SDGs) (ESCAP, 2020). Co-benefits are one of a group of integrated approaches to development that are advocated as countries aim to achieve the SDGs. While most of the SDGs are linked to the pandemic—i.e. SDG 1 on poverty is related since the loss of production, jobs and income will deepen poverty²—the most directly related is SDG 3 (Health). It is therefore vital that governments redouble efforts to achieve SDG targets 3.3 (ending epidemics) and 3.8 (universal health coverage). The growing evidence of links between exposure to poor air quality and susceptibility to COVID-19 also highlights the action on SDG targets such as 3.9 (reducing deaths from pollution) can also have deliver other types of health benefits. As such, it will be useful for international and regional organizations point to co-benefits and related decision-making tools to shed light on SDG target interrelationships. This could lead to the inclusion of co-benefits in Voluntary National Reviews (VNRs) and other development plans. Finally, these efforts could cement ongoing efforts to integrate the climate and SDG processes at different levels.

² See for instance World Bank's blog on the impact of COVID-19 on global poverty:
<https://blogs.worldbank.org/opendata/impact-covid-19-coronavirus-global-poverty-why-sub-saharan-africa-might-be-region-hardest>

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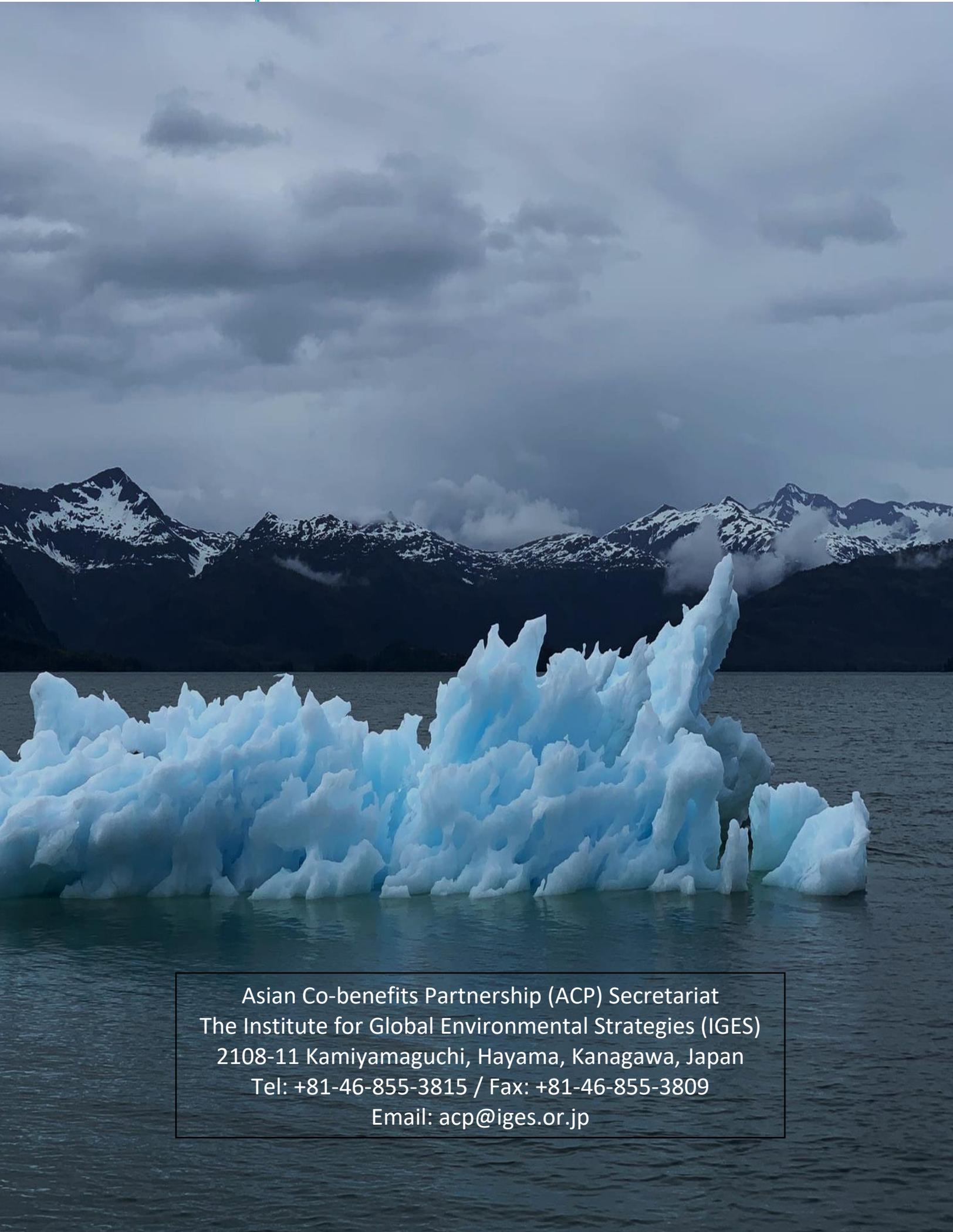
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