STRATEGIC INTERVENTIONS FOR ADDRESSING REGIONAL CLIMATE CHANGE AND HEALTH CHALLENGES

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Abstract
There is growing evidence of the widespread and intensifying impacts of climate change worldwide. The concurrence of COVID-19 and climate change has caused millions of deaths, disrupted health services, increased anxiety and depression, and reduced life expectancy across the globe. With a large share of planetary population and resources, G20 countries are at the forefront of these impacts. At the same time, they possess the capacity to address the losses and damages with well-planned strategic interventions and partnerships.

Research shows that the manner of implementation of global policies, and their outcomes, tend to vary across regions. As highlighted in recent InterAcademy Partnership reports, there are significant regional differences in the policy focus, needs, and challenges pertaining to climate change and health. It is essential to understand these differences when establishing global policies to ensure the progress of the 2030 Agenda. This Policy Brief proposes three key pathways and nine strategic interventions for addressing the integrated issues of climate change and health at the regional scale.
The Challenge
The world is facing multiple risks attributed to rapid environmental changes associated with unsustainable practices of land use, energy use, and lifestyles across regions (IPCC 2023). While the damaging impacts of climate change on human health and ecosystems (see Figure 1) are well established (IPCC 2023, WHO 2022, IAP 2022), the solutions for these issues are yet to be integrated at many levels (CFR 2023). The interlinked crises of climate change, COVID-19, and conflicts have reversed the effective implementation of SDGs (UN 2022). COVID-19 alone caused over 6.8 million deaths and infected over 756 million people, resulting in increased anxiety and depression, disrupted health services, and reduced life expectancy (UN 2022, WHO 2023).

While there are global policies for addressing these challenges—such as the World Health Organization’s risk communication guidelines, the Sendai Framework for Disaster Risk Reduction (SFDRR), Sustainable Development Goals (SDGs), and the Paris Agreement—their impacts vary considerably between regions. This could be partly explained by the inadequate coordination and incoherence between different initiatives (Khan and Mishra 2022). Additionally, as illustrated in the recent reports of the InterAcademy Partnership (IAP 2022, AASSA 2021, IANAS 2022, NASAC 2022), this can be also explained by spatial variations in the vulnerability, policy focus, and response needs of different regions, which also act as barriers in achieving SDGs globally. The regional roadmaps for SDGs play an important role in accelerating their outcomes; however, they have limited focus on climate change risks to health. This Policy Brief highlights key strategic interventions required for addressing regional climate change and health risks, with G20 countries playing an important role in enhancing the pace of the 2030 Agenda.
Figure 1: Health Consequences of Climate Change

Source: Authors’ own
The G20’s Role
ome to a significant share of global population (60 percent) and resources (80 percent of GDP), and accounting for 75 percent of global trade, G20 countries are also responsible for 75 percent of greenhouse gas emissions (D’Souza and Sarkar 2023). At the same time, they are at the forefront of seeking and offering solutions; for one, they are host to massive carbon sinks, and they also provide regular funding for various climate initiatives. As the impacts of climate change and associated health challenges vary across the globe, the application of global policies requires regional interventions to address diverse issues, needs, and resource availability. G20 countries can play a leading role in addressing the regional challenges and gaps related to climate change and health risks in contexts where most regional associations are focused on issues of development.

Many regional partnerships have failed due to multiple issues of national security, inequities, and costs, as well as inadequate empirical evidence of the risk-sharing benefits of such partnerships (ADB 2013). However, the leadership of G20 countries can create opportunities for the countries to work together in addressing common climate change impacts on health. The following paragraphs discuss the key pathways and strategic interventions to effectively integrate regional responses to global and local climate and health challenges.

Addressing global policies at the regional scale for integrated implementation

Global policies are designed to address critical issues that require global attention. In recent years, there has been an increase in the number of global policies relating to climate change, disasters, sustainability, and biodiversity. However, due to their global nature as well as inadequate reference to other policies, they may at times produce varied, and even contrary outcomes, at the regional or local level. This was reflected in the national responses to WHO’s risk communication of COVID-19 (Khan et al 2022). The guidelines made limited reference to either SFDRR or SDGs, even though they influenced the pandemic response at the local level (Khan and Mishra 2022). As different policies tend to address climate and health risks differently due to inadequate cross-referencing, certain developments made through global policies as well as their local health co-
benefits and risks remain unreported. The compounded impacts of risks had negative health effects, as observed in the impact of COVID-19 with respect to SDG-3 (UN 2022). Given countries’ diverse priorities and capacities, the application of global policies at a scale that considers regional socio-economic typology could reduce problems and ensure more appropriate application of the SDGs across regions. The key strategic interventions required for the effective regional implementation of SDGs are outlined below:

a. **Integrated regional tracking of the progress made under different policies:** With a growing number of actors and policies, it is becoming increasingly difficult to track progress and identify new gaps, as different policies are implemented across regions. Furthermore, individual policies often start from the first principles, and this can lead to inefficiency. A regional platform assessing the progress made under different policies could support regional organisations and key stakeholders to build on what is already being done and leverage achievements through SDGs. This is particularly important when addressing climate change impacts on health, which differ significantly between regions. Increasing the number and capabilities of regional monitoring stations (such as ICIMOD) and networks of scientific academies (such as AASSA, NASAC, EASAC, and IANAS) could play important roles at regional levels. G20 countries could help establish and support such initiatives.

b. **Embedding climate and health outcomes, risks and co-benefits in all SDGs reporting:** Various issues relating to health and climate change remain poorly embedded in many global policies, including the SDGs (Rukert et al 2021). SDG-3 primarily focuses on reducing mortality associated with maternity, pollution, cardiovascular, respiratory, and infectious diseases, along with enhancing health outcomes through improved facilities, early warning, and reduced respective risks. It pays little attention to the role of climate change associated with these health risks or the need for risk reduction, even though SDG-13 emphasises that climate change should be integrated in all national strategies, planning, and
policies. Some of these issues can be addressed by better integration of reporting and managing the overall intentions of the SDGs. For example, SDG-1, aiming to improve resilience against climate change and extreme events for the poor, requires improved nutrition which not only can help to avoid diseases (SDG-3) but would also reduce vulnerability to several other risks (SDG-11). Figure 2 highlights key tasks across all goals, which can be strategically planned for leveraging the SDG outcomes, particularly for climate and health goals.

Figure 2: Key Objectives to Tackle Climate Change and Enhance Health Through SDGs

Source: IAP, 2022
c. Cross-sectoral implementation of global policies and reporting:
Although SDGs are clear about the desired outcomes, there are limited guidelines as to how different stakeholders could contribute to and benefit from them. Thus, there is a need for the G20 to play an important role by facilitating regional hubs to ensure effective cross-sectoral communication about regional actions relating to climate change and health. Corresponding efforts are also required to synthesise, integrate, and widely share the outcomes of reports from G20, S20, and T20. We suggest that the 2023 G20 statements build on progress made in the 2022 report on resilient health systems which, in turn, will identify health priorities for the 2024 G20.

Enhancing regional collaboration for integrated risk communication

Although risk communication is a critical aspect of health governance, it is inadequately addressed in most global policies and SDGs (Khan and Mishra 2022). Better guidance for appropriate risk communication would not only save lives but also enable proactive planning of effective regional support systems for global policies. The IAP project conducted regional assessments of climate and health for Europe (EASAC 2019), Asia (AASSA 2021), the Americas (IANAS 2022), and Africa (NASAC 2022) which, together with the global report (IAP, 2022), highlight key regional issues of vulnerability and barriers to development that are not often included in global policies. Frequently, the priorities and communication of global policies are governed by national agendas, which guide subsequent engagement strategies and generate varied outcomes across countries (Dasandi 2021). It would be more effective to identify needs and communicate health and climate goals at a regional scale. The communication of risks and co-benefits could reduce risks from new hazards and thus accelerate the 2030 Agenda. Strategic interventions to support regional collaboration, wherein G20 could play an important role, may include the following:

a. Early warning and reality check at the regional scale: Varied impacts of climate change and health risks can be effectively communicated
across countries with shared risk exposure within a region. Regional early warning systems may further help build resilient health systems with optimised and specialised resource use. This is important, as the needs for early warning and response communication differ regionally. For example, policies in Africa suggest a need for early warning and surveillance for drought, heatwaves, and vector-borne diseases, along with monitoring of ecological toxicity and infections; in Asia, policies address disease-specific action plans and the need for coherent strategies and technology transfer; in the Americas, they emphasise integrating climate and health actions, cross-sectoral collaborations, and improving health equity (AASSA 2021, IANAS 2022, NASAC 2022). Further, as observed in the case of COVID-19, the declaration of a global threat could take time, and a timely response could occur in affected and neighbouring countries (Wang et al. 2020, Khan et al 2022, UNESCAP 2017). During a disaster, where time is of the essence, local early warning and ground-truthing may help better manage and control the risk regionally. The G20 countries could establish and support the integration of regional institutions for areas of shared geographical, climatic, and social risks.

b Effective use of existing resources and observatories: Different organisations monitor specific hazards somewhat independently, and the data collected are often communicated through different channels (AASSA 2021). In order to develop a more effective health response, it is imperative to maintain improved risk communication among organisations to prevent health issues emerging from varied and, at times, interlinked hazards such as flooding or landslides. For this to occur, the monitoring stations and observatories collecting data on specific phenomena, which are often underutilised, must be set up for real-time integrated risk communication, with all support systems addressing the systemic impacts of climate change and health. Such an approach could help reduce policy costs and
enhance their contribution to the SDGs through timely and effective warning and response (AASSA 2021). Existing regional centres, such as ICIMOD, address climate change and ecosystem services, but with limited focus on health issues. The G20 can play an effective role in supporting these regional observatories by providing funding and other resources to integrate and prioritise health.

c **Use of regional data and research:** In addition to the direct regional challenges relating to climate change and health, there are marked differences in the availability of, and access to, detailed scientific data and research capacity (AASSA 2021, IAP 2022, IANAS 2022). A recent systematic review of climate and health studies shows an unbalanced global distribution of published literature (Berrang-Ford et al 2021). This research inequity is partially linked to regional climate and geographic barriers, as well as research biases and diverse capacities of developed and developing nations. The G20 countries could support regional research by improving the capacity of under-performing research centres with shared data, research, and learning of best practices. This will help countries facing similar risks of climate change and health develop more coherent and effective policies.

**Capacity-building for leveraging regional resourcefulness and cooperation**

Capacity-building is an essential requirement for addressing climate change and health impacts. However, most global policies and support for capacity building give little consideration to regional perspectives, but would certainly benefit from including them. The strategic means of accomplishing this could include the following:

a **Capacity-building for addressing the complex challenges of climate and health across varied regional scenarios:** The regional perspectives on health challenges and policies are not always at the forefront of discussion (IAP 2022), although working at the regional scale could be the most effective approach. For example,
the shared water challenges of China, India, and Bangladesh are more likely to be appropriately resolved at the regional rather than the global scale. The European Climate and Health Observatory, a joint initiative of the European Commission and the European Environmental Agency, could serve as a model for other regions when addressing the joint challenges of climate and health (IAP, 2022). Effective regional policies based on mutual understanding would also enhance trust and support for achieving the 2030 Agenda. It is likely that many countries within a region have similar concerns regarding socio-economic or political insecurity, and the G20 could ensure that the concerns of all parties are addressed through unbiased assessments.

b  **Leveraging regional resourcefulness and cooperation:** Various regional resources and strengths could be used to develop effective support systems and narratives that integrate and leverage the specific characteristics of the region to address the diverse risks of climate and health (Krampe Scassa and Mitrotta 2018). Such an approach will help strengthen regional resources while supporting development at the local, regional, and global scales. Extending broad regional coordination beyond existing regional models, such as the African Union, the European Union, the Arctic, and the Mediterranean regions could be an effective way of enhancing regional resourcefulness and cooperation for addressing new and emerging climate and health risks (IAP, 2022). Through global distribution, the G20 nations could facilitate regional collaboration and common resources to build regional capacity and cooperation for sustainability. They can also ensure that countries with limited capacity to act are adequately supported.

c  **Integrating global and regional sources of knowledge for accelerating SDGs:** Despite the global nature of scientific progress, its effective implementation requires that information is considered within a regional context. This also requires the integration of indigenous
knowledge systems, which are a rich source of information and wisdom that should be taken into account when considering response options to effectively deal with climate and health impacts. For example, a case study of droughts in Navajo Nation in the United States, found that the decline in availability of the plants used in indigenous peoples’ medicines has increased their vulnerability (IANAS 2022). It suggests that access to both mainstream medical facilities and indigenous medicines is essential for building community resilience. An integration of scientific and indigenous knowledge could also help address the specific challenges of a community. As observed in New Zealand, various indigenous sites have been exposed to coastal erosion, requiring scientific interventions (AASSA 2021). Regional capacity-building for effective planning of regional responses based on the dynamic interactions of global and the local indigenous knowledge systems could also enhance the regional competencies for accelerating the SDGs outcomes. G20 countries could ensure that various sources of regional knowledge are broadly accessible for addressing regional issues of climate change and health.
Recommendations to the G20
Global policies are essential to addressing various challenges, though their implementation and impacts vary across regions. Therefore, clear regional pathways with strategic interventions could be more effective in addressing the interlinked challenges of climate change and health. The G20 countries, with their strong economic and political commitment to these issues, could provide support to regional leadership. This brief makes the following recommendations to the G20:

a. Although SDGs address both health and climate change, their impacts and success vary across the world. Therefore, the G20 countries must play a leading role in ensuring that global policies are adapted to a regional scale in their part of the world.

b. The G20 countries should take the lead in identifying and establishing regional research and monitoring centres to track regional risks and health co-benefits. This would enhance regional and local opportunities, collaboration and cooperation for aligned and interlinked goals proposed by SDGs, WHO, SFDRR, and UNFCCC.

c. The G20 countries must support the regional integration of risk communication of climate change and health. This will ensure that countries benefit from knowing the real-time risks and best possible outcomes that are more applicable to their local context.

d. The G20 countries should work for strengthening regional research and assessments providing appraisal of issues, needs, and support available in both scientific and indigenous knowledge systems.

e. The G20 countries should provide funding for capacity-building within their respective regions. This will ensure that appropriate expertise exists to develop the most appropriate policies within existing socio-economic and political contexts for the future challenges of climate change and health.

f. The G20 countries should provide funds to ensure effective regional coordination and capacity
building to effectively use regional resources and enhance regional synergies and collaborative efforts for accelerating the 2030 Agenda. Through these actions, the G20 countries can support regional data collection, assessment, risk communication, interventions, facilitation, and capacity-building for regional safety and sustainability. This, in turn, would enable the G20 to ensure an accelerated outcome of global policies and the 2030 Agenda at the global scale.

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