



**Asia-Pacific
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Knowledge Note: Rejuvenating Cities and Resilience Capacities for Multi-Challenges of COVID-19 Pandemic, Extreme Weather Events and Climate-Induced Disaster

APEC Emergency Preparedness Working Group

August 2022



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Background

This Knowledge Note seeks to amplify the views and experiences articulated in a series of consultations, online surveys with APEC economies members, key informant interviews, literature reviews, and a webinar event.

Reviewing the findings, we read a clear call for a more strategic, holistic, inclusive, and reconceptualised emergency preparedness system, one that strives to be driven by scientific and evidence-based resilience ecosystem. The aim would be a system that integrates capacities, knowledge and experiences from all the disparate actors that contribute to a mutually respectful synthesis, are connected, and can evolve in the face of meaningful changes in its environment.

This APEC Rejuvenating Cities and Resilience Capacities for Multi-Challenges of COVID-19 Pandemic, Extreme Weather Events and Climate-Induced Disaster (REJUVENATE-CITIES-C19 project) is to highlight the need for an all-hazards, interdisciplinary and multi-sectoral risk approach for risk-informed development and programming towards the implementation of the Sendai Framework for DRR. This project is timely to build the local capacity of APEC member economies in managing the dual challenges of the COVID-19 pandemic, extreme weather events, and climate-induced disasters.

It also shares learning from COVID-19 on the cascading and systemic nature of risks in a globally interconnected world and puts the spotlight on inclusive and multi-stakeholder governance based on the leaving-no-one-behind principles – a factor of effective emerging risk governance. By doing so, it identifies lessons learned from COVID-19 and other emergencies on persisting challenges and opportunities for multi-level and sectoral systemic risk governance, while addressing structural governance challenges to reduce disaster risk for all.

This Knowledge Note aims to be useful to all relevant policymakers and operational actors in the APEC economies. It is hoped that many of the lessons from the region will also hold key learning for others across the globe. This document presents the complexity and diversity of opinions within the sector and economies, and for each theme, the inputs of consultation have been supplemented with background information pertinent to each topic with recommendations. It is structured to discuss the following focus areas:

1. Integrated Risk and Resilience Governance
2. Risk Assessments on Current and Future Risk Scenarios
3. Financial Capacity for Disaster Resilience
4. Towards Resilient Urban Development
5. Safeguarding Natural Ecosystems in Building Resilience
6. Strengthening Institutional Capacity for Resilience
7. Understanding and Strengthening Societal Capacity for Resilience
8. Increasing Infrastructure Resilience
9. Ensuring Effective Disaster Response and Response Preparedness
10. Expediting Recovery and Building Back Better

Introduction

While Asia and the Pacific region grapple with the COVID-19 pandemic, member economies are also preparing and/or responding to disasters that have happened and will continue to happen in this disaster-prone region. The cascading effects of a pandemic and a natural hazard, with climate change impact, can compound socio-economic vulnerabilities in many member economies, and such a complex situation is becoming a new normal facing the most vulnerable population in the region.

The trend is consequently reshaping how to tackle ever-increasing and ever-complex disaster risks in the region, against the broader backdrop of ongoing debates around humanitarian system reform, localization, humanitarian-development-peace nexus, and beyond. There are many uncertainties lying ahead. On one hand, the pandemic is forcing a further change in the business model into accepting more localised leadership and partnerships; while on the other, it has also exposed the fragility of the humanitarian sector's own systems when it comes to sustainability and resilience.

The COVID-19 pandemic was declared a public health emergency of international concern on 30 January 2020. On 11 March 2020, an Emergency Committee meeting was convened, and WHO characterised COVID-19 as a pandemic, and called on economies to scale up their emergency response mechanisms taking a whole of member economies and whole of society approach.

The COVID-19 pandemic has taken a catastrophic human toll, with multiple cascading social and economic impacts of the pandemic resonating globally. The outbreak has been far more than a health crisis and has affected societies and entire economics at their core. The economic fallout of COVID-19 has also overwhelmed already fragile social protection measures in many economies and exposed significant gaps in social protection coverage.

It has, often further exacerbated by climate-related extreme events, unmasked existing inequalities and vulnerabilities, revealed gaps in comprehensive risk management and social protection, affecting lives and livelihoods, and set a major blow to the progress towards the Sustainable Development Goals. Based on experiences of the ongoing COVID-19 pandemic and other compounding disasters, the interlinkages of systemic risks need to be examined in order to drive forward risk-informed development and sustainable transformations.

This crisis has provided an opportunity to show more regional integration, even though most member economies' reaction to the COVID-19 crisis was to look inward and act alone. Within its 21 member economies, the impacts of the pandemic have reverberated soundly among its population of around 2.9 billion and in its network of vital supply chains. In the face of such challenges, member economies must respond quickly and collectively to save lives and build resilience against future pandemics and other disasters.

Cooperation on regional preparedness and response remains vital for supporting consistent, coordinated and evidence-based humanitarian action across the region, enabling it to manage and recover from the crisis in a sustainable way. The lack of such action will undermine the region's capacity to recover and exacerbate negative fallouts from the outbreak.

1. Integrated Risk and Resilience Governance

The current and future risk environment is multipolar and complex which poses the threat of cascading double or triple burdens. Now it is more important than ever to identify and share lessons learned from the ongoing COVID-19 pandemic to (i) enhance our understanding of complex risks and social impacts especially for those people most at risk, and (ii) identify opportunities for strengthened risk and multi-stakeholder governance and pathways for bringing the world back on the road to sustainable development by recovering better while addressing and integrating the importance of climate crises and leaving no one behind approach into risk governance.

Besides efficient emergency response mechanisms for short-term recovery, investment in preventive actions focused on existing social and economic drivers of risks, as well as long-term adaptation, is required. There is an urgent need to shift the focus from investing in disaster response to investing in risk reduction and resilience, by embedding risk reduction into economic development and planning. At the same time, climate change is triggering global systemic responses, including a transition in the finance sector that is increasingly recognising both the risks and opportunities for member economies, communities, and the private sector.

The nature of risks and humanitarian crises as being system-wide risks is not always well understood throughout the region, although climate change is the exception, as it is usually understood as a system-wide risk. This lack of recognition around such interconnectedness means that the models member economies, humanitarians, and development actors are using to understand disasters and crises may be outmoded and too bounded to fully appreciate their wider impacts outside of what is commonly recognised.

It is no longer enough to only make linkages between different risks without having coherent risk governance to it. When climate variability, trends of disasters, and consequences such as displacement intersect, they provide valuable insights into how on-the-ground programming needs to adapt to the realities within our 'new normal' in the region. It is important to bring practitioners and thematic experts to discuss why strengthened coherence on integrated risk and resilience governance matters for communities and member economies.

2. Risk Assessments on Current and Future Risk Scenarios

We have learned the hard lessons that risk forecasting and analysis should take account of the systemic and intersectional nature of risks, which when compounded, multiplies the impact of any standalone risk and is often borne by those least in a position to bear those risks. Therefore, member economies need to ensure henceforth that:

1. Local leaders, organisations, mutual aid groups and minor groups, who are traditionally not included in the humanitarian sector, must be part of the risk analysis and planning to effectively identify risk mitigation and management strategies.
2. Risk analysis should be effectively communicated to communities so as to support early action.
3. Risk analysis should be informed by multi-sectoral evidence that accounts for both the causes of hazards and the factors, which affect communities' responses to them.

4. Preparedness and contingency planning should consider the psychological impacts of crisis
5. There should be more investment in developing risk assessments, predictive analytics and forecasting to better understand, thus better manage future risk scenarios

3. Financial Capacity for Disaster Resilience

DRR requires a layered financial approach to provide a range of tools in a common framework to address different layers of risk, as no single financial instrument is optimal for all risk scenarios. Current financial systems struggle to discern how much is flowing to local actors and how much is contributed by local actors or those outside the international system. This gives an inaccurate picture of the scale of need, which is meeting needs and the opportunities to invest in local financial mechanisms.

Financial instruments should seek to incentivize risk reduction and finance Building Back Better. Public financing should integrate prevention as a core element of disaster risk reduction financing in order to build resilience. Aligning integrated domestic financing frameworks for sustainable development with disaster risk reduction strategies can also support this. New and innovative sources of disaster risk financing, including climate finance, need to be harnessed and explored. These include:

1. Better accounting of humanitarian financial needs and flows is required in the region including mobilising more regional and domestic sources, which allow for quality, flexible funding.
2. Intentionally link climate risk funding with DRR and preparedness efforts in the region
3. Renew support for efforts to ensure humanitarian funding mechanisms are simplified and foster diligence standards more accessible for local organisations so that more granular and nuanced mitigation actions are taken at scale, this should include incorporating more of a risk-sharing model.
4. Systems to monitor funding flows that account for contributions made by domestic and local entities to highlight the true costs of humanitarian needs in the region that are intentionally linked with international finance data
5. While continuing to advocate for increased humanitarian, development and climate funding from high-income economies, identify alternative sources of funding that are more regionalised and reliable, allowing for long-term planning and capacity development.

Financial approaches to urban disaster resilience must be practised to allow the reduction of the negative impacts of disasters on individuals and communities, the private sector, and public entities. They allow for an increase in the financial response capacity in the aftermath of disasters and reduce the economic and fiscal burden of disasters by transferring excess losses to the private capital and insurance markets. While the primary clients of disaster risk financing frameworks have traditionally been member economies, cities and local governments can also strengthen their resilience through principles and instruments that are widely applicable.

The risk of not paying attention to disaster risk reduction can lead to serious deterioration of the economy and ecosystems and a loss of trust by the population and investors. Frequent

small and medium-impact disasters and single intense events can severely disrupt community lifelines—the systems that provide food distribution, water supply, health care, transportation, waste disposal, and communications—locally and with the rest of the world. Business and private investors may shy away from cities with a perceived indifference to acting to reduce disaster risk.

4. Towards Resilient Urban Development

It was predicted that in the next decades, the major driver of the increasing loss and damage from disasters would be the growth of people and assets, especially in urban areas. Unfortunately, that is already happening now. Cities are the quintessential complex adaptive systems. They are centres of production and consumption and urban inhabitants are reliant on resources and ecosystem services, from food, water and construction materials to waste assimilation, secured from locations around the world.

Often located along the coastline, in flood plains, or along seismic rifts, with their concentration of assets and people, cities are vulnerable to disasters. The combination of rapid and unplanned urbanisation, which takes place on marginal lands and hazardous areas in combination with poorly constructed settlements and degraded ecosystems, puts more people and more assets into harm's way. Therefore, urban regions must take increased responsibility for implementing transformative solutions and through collaboration across a global system of cities, provide a transformative framework to manage resource chains.

At regional and local scales resilience could be seen as an approach to meeting the challenges of sustainable development. Rather than focusing on "optimal engineering design," cities ought to adopt a robust approach to uncertainty and unknown risks using a balance of ecosystem measures and land use options, which incorporate a greater degree of flexibility into designs of engineered measures and take into account potential weak spots and failure. Urban planners must understand and incorporate natural ecosystem services into urban infrastructure and resilience projects.

On top of this, the recognition of residual risks implies that cities have to continue improving the quality of risk communication, early warning systems, emergency contingency, evacuation, and recovery planning. Traditional cost-benefit analysis does not work well when dealing with catastrophic tail risk. Urban developments and their critical systems, therefore, require investments in non-structural aspects of risk information, strategic communication, cross-sectoral coordination, and a well-planned response and recovery strategy.

5. Safeguarding Natural Ecosystems in Building Resilience

Nature-based solutions harness the power and sophistication of nature to turn environmental, social, and economic challenges into innovation opportunities. They can address a variety of societal challenges in sustainable ways, with the potential to contribute to green growth, 'future-proofing' society, fostering citizen well-being, providing business opportunities, and safeguarding natural ecosystems in building resilience. It is one effective mechanism for addressing biodiversity loss, climate change, and poverty in an integrated manner.

Many nature-based solutions result in multiple co-benefits for health, the economy, society and the environment, and thus they can represent more efficient and cost-effective solutions than more traditional approaches. Its adoption for sustainable urbanisation and development provides multiple strategic opportunity areas as urban areas rely in large part on natural areas and features in and around cities to perform essential ecosystem services. Some of the opportunities are:

1. It provides opportunities for adaptation to climate change, thus increasing urban resilience to risks, such as droughts, floods and heatwaves, as well as opportunities for small-scale climate mitigation through increased carbon storage.
2. Nature-based solutions can support economic development in urban areas, which is highly dependent on the amount and quality of natural resources available, such as water for sanitation, drinking, and manufacturing.
3. The long-term sustainability of our food systems and their security relies on the application of nature-based solutions that safeguard our natural ecosystem.
4. It enhances and nourishes the region's natural capital – providing resources and services, and absorbing emissions and wastes.
5. A balanced combination of nature-based solutions with grey infrastructure – structures such as dams, seawalls, roads, pipes, or water treatment plants can significantly reduce vulnerability to flooding and erosion while maintaining the beauty of coastlines.

6. Strengthening Institutional Capacity for Resilience

APEC member economies must stay committed to maintaining dialogue on evolving exposures and trends that will help us best prepare for the future risk landscape. It is this particular focus, together with the need for a holistic approach to risks in the future, that underlies the notion of reducing and managing emerging unconventional risks and hazards such as the one we are fighting together now. In the effort to strengthen institutional capacity for resilience, several modalities of working were identified:

1. Share information on upcoming preparedness activities and events (e.g. training and forums) in the region.
2. Build a community of practice for the region.
3. Respond to member economies-level requests for support on emergency preparedness and simulation exercises.
4. Support member economies to contextualise global policy and guidelines on preparedness initiatives or humanitarian-development reform for implementation in the region.
5. Increase multi-stakeholder engagement on issues of humanitarian-development effectiveness within the region.

The road towards strengthened institutional capacity also provides opportunities to share expertise, ideas and experience across the region in using science and technology to reduce disaster risk and strengthen community resilience. Scientists and end-users of technology must share evidence of the use of applied science and technology to increase community understanding of disaster risk and inform the development of infrastructure and enhance capacity for early warning and early action.

7. Understanding and Strengthening Societal Capacity for Resilience

While multiple event patterns are repeated every year, only a few really capture the public attention. Other risks continue to intensify under the radar. For at-risk communities and affected families, the interplay between dealing with poverty, climate stresses, and natural hazards does not have clear distinctions. Yet the discourse of disasters is still too often seen in isolation. There is a need to transcend the divide between relief aid and development work in delivering better results for people affected by crisis, and also broaden the development gains for millions of the ‘furthest behind’ so they can chart their own course out of aid-dependency.

The sector is at present permeated by the notion that maintaining the status quo is no longer an option as humanitarian tools and services are, in many cases, not suitable for modern emergencies. This has resulted in an unprecedented, sector-wide concern with change: that humanitarianism must change to stay relevant and that humanitarian agencies need to become more innovative simply to maintain their relevance. In achieving a culture of resilience, it is however not enough if only a few of the civil society organisations, humanitarian actors, and local government actors have disaster risk reduction and adaptation included as an inherent part of their work.

Achieving a substantial reduction in disaster losses will require a whole-of-society approach that supports changes in societal and individual behaviour, norms and value systems, together with meaningful partnerships between stakeholders, which can help form better working ecosystems, ensure local acceptance and sustainability, and build social capital in providing opportunities for reducing disaster risk and building a resilient future. One aspect of doing this is by nurturing societal leadership. Focussed investment at the local level in developing effective cooperation for the promotion of DRR work is important while ensuring local development plans that are risk-informed, and aligned with context-specific DRR strategies.

8. Increasing Infrastructure Resilience

Emerging economies in the Asia-Pacific region are rapidly increasing investment in physical infrastructure and associated systems. Much of the region’s population is increasingly urban, and disaster risk concentrates within cities and urban areas of all sizes and economic characteristics. Resilient infrastructure is more than the protection of ‘hard’ infrastructure, and by its nature, building resilient infrastructure is dependent on both the interconnected and standalone systems that support it.

Innovation and technology for DRR drive economic development and promotes environmental sustainability, thus contributing to improved community resilience. Considerable efforts need to be taken towards enhancing the role of technology in reducing vulnerabilities of communities and ecosystems at risk, preventing risks, and building the resilience of critical infrastructure in the region.

Incorporating disaster resilience strategies into critical infrastructure that is scalable and inclusive to the needs of all members of the community presents both challenges and opportunities. Sharing and learning from the experience of others throughout the Asia Pacific region is central to supporting APEC member economies to build capacities in increasing

their infrastructure resilience that is able to withstand shock events and continue to operate or return to service as soon as possible after any disruption.

Self-assessment tools for leaders, city managers, urban planners, and other personnel with a responsibility for ensuring the safety, maintenance, and security of all aspects and functions of a community area, including critical infrastructure and services, health facilities, transport and telecommunications networks, sanitation, water, and others are best to be made readily available and to be used regularly. These tools should combine research, training, human resources capacity, skill development, urban practice, knowledge, institutional capacity and other relevant modules into a coherent capacity development strategy to address knowledge, skill and institutional gaps of individuals, communities and organizations of each economy members at various levels.

9. Ensuring Effective Disaster Responses and Response Preparedness

The ability to deliver speed, volume and quality in response is dependent on linking effective preparedness to coordinated response. This requires the involvement of member economies from the onset of the response, but also during the preparedness phase when there is a need to work strategically with partners to build an understanding of best practices that can be implemented during a response.

1. Create a mechanism in which anticipatory action is linked with humanitarian, DRR, climate change adaptation, and development efforts. In such an effort to anticipate, and identify potential risks together with local leaders, organisations and mutual aid groups, who are traditionally not included in the humanitarian sector, so that they become embedded in any response planning.
2. The scale and impact of climate change in the region require a holistic approach that connects and harmonises the efforts of resilience, DRR and humanitarian actors to reduce the risk and impacts of climate change. This will require shifts in coordination and financing mechanisms
3. Works towards a common understanding of humanitarian need - recognition and analysis of need across all contexts, better recognition of emerging or unrecognised humanitarian needs even in middle and high-income contexts with high levels of inequality.
4. Humanitarian tools and services need to be better scalable from very small local responses to overwhelming mega-disasters - greater recognition and funding allocation for smaller disasters will help reduce the compound loss of resilience and mitigate the impact of more severe events in the future.
5. Better integrate hyper-local civil society, mutual aid groups and other structures into response mechanisms and local, domestic and international contingency planning.

10. Expediting Recovery and Building Back Better

Post-disaster recovery programmes are complex social redevelopment initiatives that interact in many ways with a range of societal issues and surviving daily life from a broader perspective. Consequently, recovery programmes can only be addressed responsibly within a broader developmental framework, which addresses the realities of each economies' and communities' unique context. In most cases, the most dominant of these realities are

poverty, health and education problems, unemployment and scarce resources. Therefore, four central dimensions lie at the core of such a developmental framework:

1. The need to stimulate the emergence of qualitatively decent total living/ working/ learning environments.
2. Identifying the need to use recovery and rebuilding initiatives to generate employment and secure sustainable livelihoods.
3. The need to stimulate social cohesion through a reflexive design and planning programme.
4. Participative roles of the community as an important process.

Recovery is an opportunity to build back better and improve development, in particular, to implement sound environmental practices that reduce future disaster risk. It is in this spirit that the foundations for recovery and a return to longer-term development should be planned from the outset of a humanitarian emergency and put in place as early as possible, to reduce the suffering and improve the ability to reach and improve the lives of vulnerable people affected by crisis.

Recovery is best achieved when the affected community exercises a high degree of self-determination. Recovery programmes extend beyond restoring physical assets or providing welfare services, and they recognise that both communities and individuals have a wide and variable range of recovery needs and that recovery needs to meet all these needs in a coordinated way.

To ensure a smooth transition into mid-term recovery and long-term sustainable development, disaster recovery must begin during the ongoing response. Where households, businesses, and communities are struggling to survive and cope, the need for recovery support is immediate.

Conclusion

The scale, frequency and severity of disasters have risen progressively over the last 20 years. This trend is likely to continue as rapid urbanisation and climate change combine to create a 'perfect storm' in terms of increasing levels of vulnerability; a storm which will be further compounded by public health challenges, poverty, environmental degradation, and resource scarcity.

The rapidly escalating cost of disasters is an increasing cause for concern for insurers, businesses and member economies, but the true costs of a disaster are felt most acutely at the community level and are determined by the community's ability to recover and rebuild their lives. Investment in reducing the impact of natural hazards and in enhancing the ability of communities to recover is more cost-effective long term than dealing with the consequences of natural hazards.

In the face of the increasing scale, frequency and severity of crises like the multi-challenges of the COVID-19 pandemic, extreme weather events and climate-induced disasters, a comparable paradigm shift is taking place in disaster risk reduction and management in recognition of the complexity and uncertainty generated by these challenges. There is growing recognition that alongside hazard-specific measures to reduce disaster risk, more

emphasis needs to be placed upon tackling the underlying causes of vulnerability and on developing generic adaptive capacity to respond to both catastrophic events and accumulating stresses.