Inclusive Resilience Outlook

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Enabling Resilience for All
The Critical Decade
to Scale-up Action

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Summary

Climate change and disasters affect people differently depending on their socioeconomic status, race or ethnicity, abilities, age, gender and sexuality, access to resources and decision-making power. Individuals and groups who are marginalised are often disproportionately vulnerable to climate hazards, and less capable of adapting to changing conditions. Moreover, climate change can deepen inequalities, further impoverish the poor, and undermine human rights, much like COVID-19 has.

The Asia-Pacific region's high exposure to climate hazards has made resilience-building an urgent priority. However, if resilience-building efforts fail to include marginalised people and recognise their differentiated vulnerabilities, they could leave a large share of the population in danger. This is a particular concern as the pandemic has intensified competition for limited resources, with implications for current and future actions to build resilience to climate risks.

This background document focuses on how to build inclusive resilience in the Asia-Pacific region – that is, resilience-building processes and practices that work for everyone. This paper presents information on progress, gaps and challenges in strengthening inclusive resilience, around the five key enablers that will guide the discussions at 7th Asia Pacific Climate Change Adaptation Network (APAN) Forum: policy and climate governance; planning and processes; science and assessment; technologies and practices; and finance and investment. It concludes with priorities for more inclusive resilience-building across the Asia-Pacific region in this "critical decade of action".

Inclusive resilience requires that all interest groups be recognised and share power and resources equitably. Inclusive resilience must also reflect countries' commitments to key human rights treaties and global compacts, including – but not limited to – human rights treaties, the Sendai Framework on Disaster Risk Reduction, the 2030 Agenda for Sustainable Development and the Paris Agreement.

1. Resilience and Inclusion

Resilience is central to climate change adaptation and disaster risk reduction efforts across the Asia-Pacific region and around the world. In practice, the term is applied broadly to describe the ability to withstand and recover from shocks: whether it is infrastructure that holds up to typhoons, landslides or flash floods, supply chains that can get through disruptions, or communities that can successfully rebuild after a disaster. A great deal of resilience-building today involves engineering and logistics, with little, if any, consideration of social or political factors.

This Outlook starts from a narrower, but also more complex definition of resilience: "the capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure while also maintaining the capacity for adaptation, learning and transformation" [1].

From this perspective, effective resilience-building goes well beyond ensuring that the Asia-Pacific region can withstand the physical and economic impacts of climate change and other hazards. It also requires that the people of the region – all of them – will be able to not just cope, but also adapt, learn, even transform, so they can persist and thrive despite drastically changing circumstances.

That is what we call inclusive resilience: resilience that benefits all of society – never protecting some at the expense of others, and never leaving anyone behind. Inclusive resilience also recognises that hazards affect people disparately, both because they are unequally exposed (e.g. living on the mountains or coast vs. inland or lowlands, working in agriculture vs. industry), and because of underlying disparities based on race, gender, ethnicity, religion, class and/or caste, age, physical ability, sexuality, migration status, and other factors. To be truly inclusive, resilience-building needs to not only avoid excluding anyone, but specifically engage those who are marginalised, listen to them, and respond to their needs and perspectives.

In the Asia-Pacific region, climate change and disasters pose particularly great risks to certain areas, including low-elevation coastal zones, river deltas, islands, informal settlements, water-scarce regions, and mountain ecosystems, among others. In these places, the frontlines of resilience-building, some populations and communities are disproportionately vulnerable to climate change impacts – for example, women (especially those who are pregnant or nursing), the elderly, children, LGBTQI+, people with disabilities, Indigenous Peoples and migrants. Often, however, adaptation and disaster risk reduction (DRR) measures take a "big picture" approach that may improve the resilience of the physical infrastructure and the local economy, and even protect many people from future disasters, but fails to account for differentiated needs in the population. If resilience-building efforts do not recognise people's "diverse experiences of risks or socio-economic barriers to resilience", they can leave out poor and marginalised people[2].

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[1] IPCC (2018). Annex II: Glossary. In Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty. Masson-Delmotte, V., Zhai, P., Pörtner, H.-O., Roberts, D., Skea, J., et al. (eds). Intergovernmental Panel on Climate Change, Geneva. https://www.ipcc.ch/sr15/

[2] Forsyth, T. (2018). Is resilience to climate change socially inclusive? Investigating theories of change processes in Myanmar. World Development, 111. 13–26. DOI: 10.1016/j.worlddev.2018.06.023

Deprivation and marginalisation – social, economic, political and/or physical – directly affect resilience[3]. Resilience and adaptive capacity are determined by people's level of preparedness, access to resources, abilities, societal standing and decision-making power (or lack thereof). As Ribot[4] notes : ''the inability to manage stresses does not fall from the sky. It is produced by on-the-ground social inequality; unequal access to resources; poverty; poor infrastructure; lack of representation; and inadequate systems of social security, early warning, and planning. These factors translate climate vagaries into suffering and loss.''

Resilience-building efforts that tackle specific climate or disaster risks, but not underlying inequalities, are thus not truly inclusive. This is why Pelling[5], for instance, has highlighted that adaptation provides an opportunity to transform society as it responds to climate change, to unpick inequalities and re-evaluate the sustainability of social-environmental relations. Inclusive resilience starts by understanding how power and resources are distributed within societies, and whose needs are not being met. It focuses first on reaching those who are furthest behind[6] and carving out space for voices that have not been heard[7], and it drives transformative change.

Inclusive resilience is underpinned by three core types of justice: distributive, procedural, and of recognition[8]. Distributive justice means that the outcomes are equitable; procedural justice in this context means that all have a voice in decision-making[9]. Recognition justice is about ensuring that no one is made invisible, as poor, marginalised and vulnerable people often are. As Schlossberg notes, ''the non-, mis-, or malrecognition of people, communities, and conditions … is often at the core of injustice''. In the context of adaptation and DRR, it is also crucial to recognise spatial justice[10], that is, to ensure that resources and opportunities are equitably distributed across space, whether within or across borders. These notions of justice are critical for sustainability transformations[11].

A key aspect of inclusive resilience is to expand the political capabilities of poor, vulnerable and marginalised people so that they become active participants in resilience discussions and actions[12]. As resilience is also driven by relations among States, there is also need to carefully manage transboundary climate risks to ensure that one country's adaptation measures do not reduce the resilience of another.

[3] CORDAID and Partners for Resilience (2020). Step-by-Step Guide to Inclusive Resilience. Partners for Resilience, The Hague
[4] Ribot, J. (2010). Vulnerability does not fall from the sky: toward multiscale, pro-poor climate policy. In Social Dimensions of Climate Change: Equity and Vulnerability in a Warming World. Mearns, R. and Norton, A. (eds). International Bank for Reconstruction and Development/World Bank, Washington. 47–74
[5] Pelling, M. (2010). Adaptation to Climate Change: From Resilience to Transformation. Routledge, London
[6] Chambers, R. (1988). Rural Development: Putting the Last First. Longman Scientific & Technical, Harlow, Essex
[7] Pease, B. (2013). Undoing Privilege: Unearned Advantage in a Divided World. Zed Books Ltd., London
[8] Schlosberg, D. (2013). Theorising environmental justice: the expanding sphere of a discourse. Environmental Politics, 22(1). 37–55.
[9] Khan, M., Robinson, S., Weikmans, R., Ciplet, D. and Roberts, J. T. (2019). Twenty-five years of adaptation finance through a climate justice lens. Climatic Change, no. 161. 251–69. DOI: 10.1007/s10584-019-02563-x
[10] Soja, E. W. (2013). Seeking Spatial Justice. University of Minnesota Press, Minneapolis
[11] Bennett, N. J., Blythe, J., Cisneros-Montemayor, A. M., Singh, G. G. and Sumaila, U. R. (2019). Just Transformations to Sustainability. Sustainability, 11(14). 3881. DOI: 10.3390/su11143881
[12] Matin, N., Forrester, J. and Ensor, J. (2018). What is equitable resilience? World Development, 109. 197–205.

2. An Inclusion Perspective on Key Enablers of Resilience

The analysis in this section follows the same structure for each enabling condition of resilience in the Asia-Pacific region, identifying "bright spots" (promising developments and practices) and "hot spots" (areas of concern).

2.1 Policy and Climate Governance

Equity and inclusion are well-established principles in global climate policy, building on a strong foundation in the Universal Declaration of Human Rights and related instruments. Inclusion is at the core of the Sustainable Development Goals' objective of "leaving no one behind",[13] and it underpins the Sendai Framework for Disaster Risk Reduction, the New Urban Agenda, and the human rights principles of the Paris Agreement.

The Sendai Framework on Disaster Risk Reduction highlights that effective disaster risk reduction needs to be people-centred, inclusive and accessible, explicitly noting: "Governments should engage with relevant stakeholders, including women, children and youth, persons with disabilities, poor people, migrants, indigenous peoples, volunteers, the community of practitioners and older persons in the design and implementation of policies, plans and standards"[14] . The New Urban Agenda commits to inclusion in planning and implementation by "promot[ing] international, national, sub-national, and local climate action, including climate change adaptation and mitigation, and to support cities and human settlements, their inhabitants and all local stakeholders to be implementers".[15]

The Paris Agreement stipulates that "adaptation action should follow a … gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems"[16]. The Paris Agreement also notes repeatedly that the "needs of developing country Parties", especially those that are "particularly vulnerable" to climate change impacts must be recognised, and those countries' adaptation efforts must be supported.

Bright Spots

There are several promising innovations in resilient and inclusive climate governance in urban areas in the Asia–Pacific region, including the Asian Cities Climate Change Resilience Network (ACCCRN) and the 100 Resilient Cities initiative[17]. ACCCRN has helped cities identify and implement a wide range of resilience-building measures – for example, volunteer mentor houses in Hat Yai, Thailand, which provide early flood warnings to surrounding communities and also bring volunteers together to enhance their skills[18].

The United Nations Environment Programme (UNEP) has systematically tracked progress on adaptation around the world, publishing a series of "adaptation gap" reports that can help inform more inclusive resilience-building[19]. The 4th World Reconstruction Conference issued a communiqué on 14 May 2019 on inclusion for resilient recovery.[20]

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[13] See https://sdgs.un.org
[14] UN (2015). Sendai Framework for Disaster Risk Reduction 2015–2030. Adopted at the Third UN World Conference, Sendai, Japan, March 2015. United Nations. https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030
[15] See https://habitat3.org/the-new-urban-agenda/
[16] UNFCCC (2015). Paris Agreement. FCCC/CP/2015/10/Add.1. United Nations Framework Convention on Climate Change, Paris. http://unfccc.int/paris_agreement/items/9485.php
[17] Nielsen, A. B. and Papin, M. (2020). The hybrid governance of environmental transnational municipal networks: Lessons from 100 Resilient Cities. Environment and Planning C: Politics and Space. 239965442094533. DOI: 10.1177/2399654420945332
[18] Middleton, C. and Pratomlek, O. (2020). Thailand: Flooding disaster, people's displacement and state response: A case study of Hat Yai municipality. In Climate Change, Disasters, and Internal Displacement in Asia and the Pacific: A Human Rights-Based Approach. Scott, M. and Salamanca, A. (eds). Routledge, London
[19] UNEP (2021). Adaptation Gap Report 2020. UNEP, Nairobi
[20] See https://www.gfdrr.org/en/WRC4/communique.

It calls for supporting marginalised groups that are especially vulnerable to the impacts of natural hazards and who risk being made even more vulnerable through the recovery process, and adopting and promoting more inclusive approaches to recovery to promote greater resilience for the community as a whole.

Hot Spots

UNEP recognises that "meeting the global goal on adaptation relies heavily on action by national governments", and there exists already a "vast and complex landscape of adaptation legislation and policy"[21]. However, the development of national and sub-national climate adaptation policies and resilience interventions in the Asia-Pacific region has not been very participatory or inclusive.

Several people raised this issue during the second webinar of the APAN Virtual Dialogue Series for Enabling Resilience and Scaling-up Action on Climate Change Adaptation, "From words to action: what more should be done to ensure resilience for all in Asia and the Pacific?"[22] As one of the speakers, Dharini Priscilla, of The Grassrooted Trust, put it: "When working with the marginalised, inclusivity is not a choice: we have to do it. We need to be unified. Resilience and climate change adaptation is better when we work together. Inclusivity is not up for debate."[23]

Disability rights also need to be enshrined in climate governance because of climate change's differential impacts on disabled people[24]. Partners for Resilience has developed detailed guidance on how to build the resilience of the elderly, people with disabilities, children and women, including those who are pregnant and/or lactating [25]. It outlines seven steps for inclusive resilience, including recognising diversity and equality for all, identifying and prioritising particularly vulnerable groups to assist in localised decision-making, and engaging directly with communities and local organisations to make them equal partners with governments.

Lack of inclusion can undermine the effectiveness of resilience-building efforts, as documented in research in mountain communities, for instance, where existing efforts do not meet the expectations of these communities[26]. Failing to ensure that resilience-building is equitable, inclusive and accountable can also lead to a backlash. After a series of typhoons in the Philippines in late 2020, for example, there were calls for more accountability and questions about the relevance and utility of "resilience" to the lives of ordinary Filipinos[27]. Civil society organisations want to stop "glorifying the narrative of Filipino resilience"[28], which they call a "myth"[29] as millions continue to suffer due to natural hazards every year. Others have called resilience a "shroud to cover a downfall"[30]. The backlash will continue unless resilience-building efforts addresses the causes of people's suffering head-on.

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[21] UNEP (2018). The Adaptation Gap Report 2018. United Nations Environment Programme, Nairobi. https://www.unenvironment.org/resources/adaptation-gap-report

[22] See http://www.asiapacificadapt.net/adaptationforum2020/programme/

[23] See https://www.sei.org/perspectives/resilience-for-all-key-messages-from-the-virtual-dialogue-on-inclusive-resilience/

[24] Jodoin, S., Lofts, K.A. and Ananthamoorthy, N. (2020). A Disability Rights Approach to Climate Governance. Ecology Law Quarterly, 47(1).

[25] CORDAID and Partners for Resilience (2020). Step-by-Step Guide to Inclusive Resilience. Partners for Resilience, The Hague

[26] McDowell, G., Harris, L., Koppes, M., Price, M. F., Chan, K. M. A. and Lama, D. G. (2020). From needs to actions: prospects for planned adaptations in high mountain communities. Climatic Change, 163(2). 953–72. DOI: 10.1007/s10584-020-02920-1

[27] See, e.g., https://www.rappler.com/voices/ispeak/problem-filipino-resilience and https://www.rappler.com/voices/thought-leaders/analysis-filipinos-arent-resilient-duterte-incompetent-abusive

[28] See https://newsinfo.inquirer.net/1361055/environmental-groups-to-govt-stop-glorifying-resilience-narrative

[29] See https://www.manilatimes.net/2020/11/06/opinion/columnists/filipino-resiliency-is-a-myth-and-always-has-been/791966/

[30] See https://philippines.makesense.org/2020/10/07/breaking-the-silence-of-resilience/

2.2 Planning and Processes

Adaptation plans at the national, sub-national and local levels determine, to a great extent, how resilience-building will occur, and how inclusive it will be. Adaptation planning requires understanding climate risks as well as underlying drivers of vulnerability. This means that to be effective, adaptation planning needs to be based not just on scientific evidence of actual or expected climate change impacts, but on participatory processes that enable a broad range of voices to be heard, including those of marginalised people.

Bright Spots

At the national level, countries in the Asia-Pacific region are developing national adaptation plans (NAPs), outlined adaptation priorities in their nationally determined contributions (NDCs), and developed various roadmaps, master/strategic plans, targets and policy frameworks on adaptation and resilience-building. Region-wide initiatives such as the Pacific Adaptation to Climate Change (PACC) Programme, the first major climate change adaptation initiative in the Pacific region, are also driving the integration of climate risks into national planning and processes[31].

Existing international instruments already recognise the linkages between human rights, marginalised populations, and climate resilience. International programmes such as the United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation (UN-REDD) have been working to include groups such as Indigenous Peoples, for instance[32]. The Least Developed Countries Expert Group of the United Nations Framework Convention on Climate Change (UNFCCC) has produced multiple publications to support more inclusive NAP development processes[33]. Many governments are clearly aware of the need for inclusion, as shown by mechanisms such as youth consultations in NAP and NDC processes.

There are also multiple examples of successful, locally-led adaptation efforts, which are increasing and have been recognised as important aspects of effective climate action[34]. Community-based adaptation is widely recognised as an effective tool for enabling inclusion in adaptation through local deliberations[35].

There has been progress in addressing gender disparities as well, heeding the Global Commission on Adaptation's (2019) warning that ignoring them will "only deepen existing vulnerabilities and encourage new types of exclusion[36]". Women-led interventions are making an impact across the region[37]. In Nepal, for example, the Dumrithumka Adarsh Mahila Community Forest User Group has protected forests by adopting more efficient cook stoves, reducing overgrazing, replanting forests to restore habitats, and promoting home gardens that increase household incomes. Their work has already inspired other communities to follow suit[38].

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[31] See https://www.sprep.org/pacc

[32] See https://www.cgdev.org/blog/when-foes-become-friends-indigenous-rights-and-redd-indonesia

[33] See https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans-naps/publications-naps

[34] See https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans-naps/publications-naps

[35] Ayers, J. (2011). Resolving the adaptation paradox: Exploring the potential for deliberative adaptation policy-making in Bangladesh. Global Environmental Politics, 11(1). 62–88.

[36] Global Commission on Adaptation (2019). ADAPT NOW: A Global Call for Leadership on Climate Resilience. Global Commission on Adaptation and World Resources Institute, Washington, D.C

[37] Resurrección, B., Bee, B. A., Dankelman, I., Park, C. M. Y., Haldar, M. and McMullen, C. P. (2019). Gender-Transformative Climate Change Adaptation: Advancing Social Equity. Paper commissioned by the Global Commission on Adaptation (GCA). Global Commission on Adaptation, Rotterdam and Washington, DC

[38] See https://www.birdlife.org/asia/news/women-dumrithumka-are-leading-example

Hot Spots

There are still only limited examples of vulnerable groups being engaged in shaping the designs of NAPs or NDCs, however. Frameworks for adaptation and DRR are still formulated top-down and often exclude key perspectives, such as those of people with disabilities[39]. This issue is also being discussed in the Communities and Local Resilience Outlook which highlight the top-down nature of climate governance and it is disconnected from local efforts[40].

Indigenous Peoples' rights[41] and children's rights are yet to be integrated in climate-related planning and processes. Youth engagement remains ad hoc in many decision-making processes[42], and in some countries, young climate activists have faced brutal oppression. At the same time, many marginalised communities are struggling so much to meet basic needs that adaptation seems like a distant luxury.

2.3 Science and Assessment

Robust science and data are the foundations of effective resilience-building. They define the nature and scope of the hazards we face, explain how physical impacts may translate into social and economic impacts, and identify and evaluate potential solutions. This work is done by experts with specialised skills and scientific knowledge, but inclusion is crucial to avoiding a wide range of "blind spots": from ignoring centuries of historical knowledge held by Indigenous Peoples, to missing vital evidence of resilience and effective adaptations among local or marginalised populations. Without inclusive and truly participatory research, resilience-building efforts will be based on flawed and incomplete knowledge and fail to represent the views and aspirations of vulnerable groups.

Bright Spots

There is a growing and robust literature that can support inclusive research and knowledge co-creation for adaptation: from detailed guidance from the Programme of Research on Climate Change Vulnerability, Impacts and Adaptation[43], to the CGIAR Gender and Inclusion Toolbox[44] [45], to guidance on how to integrate Indigenous Peoples[46] and children's rights in DRR[47]. UNEP's Adaptation Gap Report provides a framework for assessing adaptation status and progress. At the global level, a World Adaptation Science Program has been initiated in 2018 to promote science for climate change adaptation policy and action[48]. Recognising mountain people's knowledge and priorities, the Hindu Kush Himalayan Monitoring and Assessment Programme (HIMAP) provides a platform for long-term research and collaboration[49]. The principles of locally-led adaptation have been discussed, endorsed and launched at 2021 Gobeshona Global Conference and the Climate Adaptation Summit.

[39] Scott, M. and Salamanca, A. (2020). Internal displacement in the context of disasters and climate change in Asia and the Pacific: Introduction to the volume. In Climate Change, Disasters, and Internal Displacement in Asia and the Pacific: A Human Rights-Based Approach. Scott, M. and Salamanca, A. (eds). Routledge, London. 1–17

[40] Taishi Y., Austin S., Kohli R., Sitathani K., (2021). Communities and Local Resilience Outlook. Prepared for the 7th Asia-Pacific Climate Change Adaptation Forum, 8-12 March 2021. Bangkok: Asia Pacific Adaptation Network

[41] See http://regional-forum.samdhana.org/wp-content/uploads/Yogyakarta-Declaration_191108-1.pdf

[42] See https://www.unicef-irc.org/article/928-child-rights-at-risk-the-case-for-joint-action-with-climate-change.html

[43] PROVIA (2013). Research Priorities on Vulnerability, Impacts and Adaptation. Responding to the Climate Change Challenge. United Nations Environment Programme, Nairobi

[44] See https://cgspace.cgiar.org/bitstream/handle/10568/45955/CCAFS_Gender_Toolbox.pdf?sequence=7

[45] Jost, C., Ferdous, N. and Spicer, T. D. (2014). Gender and Inclusion Toolbox: Participatory Research in Climate Change and Agriculture. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), Washington, D.C

[46] PAHO and WHO Strategic and Technical Advisory Group for Infectious Hazards (2015). Recommendations for Engaging Indigenous Peoples in Disaster Risk Reduction. Pan American Health Organization and World Health Organization, Washington, DC

[47] UNDRR (2020). Engaging Children and Youth in Disaster Risk Reduction and Resilience Building: A Companion for Implementing the Sendai Framework for Disaster Risk Reduction 2015-2030. UNDRR, Geneva

[48] See https://www.unenvironment.org/explore-topics/climate-change/what-we-do/climate-adaptation/world-adaptation-science-programme

[49] See https://www.icimod.org/initiative/himap/

Hot Spots

Despite the recognition of the importance of participatory research and its value in complementing top-down approaches to research, much remains to be done to scale it up and ensure that bottom-up ideas actually influence broader policy and practice. Scaling-up is also crucial because bottom-up approaches such as community-based adaptation not only create knowledge, but also build resilience through iterative learning-by-doing. However, top-down approaches tend to sideline locally-led efforts and the adaptation insights they produce favour national priorities[50].

2.4 Technologies and Practices

As noted in the introduction, to a great extent, resilience-building is an engineering and logistical challenge: identifying technologies, design solutions and new practices that reduce the vulnerability of systems and communities to climate change impacts and disasters. This work is well under way: from early warning systems for major storms and other extreme events, to new agronomic practices and crop varieties that can withstand drought or salinisation, to various approaches to prevent coastal erosion.

There is enormous demand for continued innovation to build resilience in the Asia-Pacific region and worldwide. As these solutions are developed, the key question from an inclusion perspective is: Who will or will not benefit? And behind that question, there is another: Whose resilience-building needs are actually recognised, and whose are being ignored?

As with knowledge for adaptation, it is also crucial to recognise traditional ecological knowledge and practices, especially among Indigenous Peoples, that have helped communities to sustain themselves and manage risks for generations[51]. Indigenous practices of climate change adaptation have been documented across the Pacific region[52] and Asia[53] [54]. In the Hindu Kush Himalayas, mountain communities have harnessed traditional crop varieties to overcome crop loss from extreme events such as hailstorms and heavy rains, selecting dwarf varieties of paddy to reduce waterlogging from heavy rains. Farmers also harness traditional pest management practices to combat increases in pest attacks and utilise crop diversity as a means of risk avoidance. Resilience-building efforts should build on local knowledge and practices, not seek to replace them.

[50] Omukuti, J. (2020). Country ownership of adaptation: Stakeholder influence or government control. Geoforum, 113. 26–38. DOI: 10.1016/j.geoforum.2020.04.019

[51] Hosen, N., Nakamura, H. and Hamzah, A. (2020). Adaptation to Climate Change: Does Traditional Ecological Knowledge Hold the Key? Sustainability, 12(2). 676. DOI: 10.3390/su12020676

[52] Bryant-Tokalau, J. (2018). Indigenous Pacific Approaches to Climate Change: Pacific Island Countries. Palgrave Macmillan, Cham, Switzerland

[53] Hiwasaki, L., Luna, E., Syamsidik and Marçal, J. A. (2015). Local and Indigenous Knowledge on Climate-Related Hazards of Coastal and Small Island Communities in Southeast Asia. Climatic Change, 128. 35–56. DOI: 10.1007/s10584-014-1288-8

[54] Shaw, R., Uy, N. and Baumwoll, J. (2008). Indigenous Knowledge for Disaster Risk Reduction: good practices and lessons learned from experiences in the Asia-Pacific Region. United Nations International Strategy for Disaster Reduction: Bangkok.

Bright Spots

There are already numerous initiatives to promote new technologies and practices, such as the Association of Southeast Asian Nations (ASEAN) Climate Resilience Network, which offers guidance on technologies for climate smart land use[55], and the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), which is implementing several climate-smart technologies and practices in South Asia[56]. Since COP21, a Local Communities and Indigenous Peoples Platform has gathered "the knowledge, technologies, practices and efforts of local communities and indigenous peoples" on addressing and responding to climate change[57].

There are also climate services platforms where farmers and others can access information that can help them adapt. Though these services started as technocentric solutions, ongoing efforts are democratising the field. For instance, Climandes provides for a checklist on how to establish a user-centric climate service[58]. Similarly, the Indonesian Met Bureau and Department of Agriculture are promoting Climate Field Schools for farmers and have recently incorporated traditional ecological knowledge in the training modules[59]. Practical Action has also produced a guidebook of technologies for adaptation in agriculture that includes screening for social equity and inclusion[60].

Hot Spots

Technologies and resilience-building practices are still mostly developed top-down, however, with little engagement of vulnerable groups to understand their needs and provide the tailored solutions they need. For instance, people with disabilities need inclusive DRR practices and technologies. Children and the elderly have unique technological needs. It is also crucial to ensure that innovations reach all who need them – for instance, can women farmers access new technologies and resilient crop varieties as well as men?[61]

Finally, it is important to ensure that new technologies are actually sustainable in terms of the materials and the production processes used[62], and that they are not appropriated to do harm. For instance, the same social media tools that have delivered early warning services and vital information to vulnerable groups are sometimes used to misinform, deceive, and stoke division and hate. Nature-based solutions (NbS) also play important roles in building resilience[63].

[55] See https://asean-crn.org/
[56] See https://ccafs.cgiar.org/research/projects/big-data-analytics-identify-and-overcome-scaling-limitations-climate-smart
https://ccafs.cgiar.org/research/projects/capacitating-farmers-and-fishers-manage-climate-risks-south-asia-caffsa
[57] See https://unfccc.int/LCIPP#eq-3
https://www4.unfccc.int/sites/nwpstaging/News/Pages/Inidigenous-Peoples-and-Local-Communities-Platform-Update.aspx.
[58] MeteoSwiss and Senamhi (2018). Designing User-Driven Climate Services. What We Can Learn from the Climandes Project: A Checklist for Practitioners, Scientists and Policy Makers. MeteoSwiss/Senamhi and Senamhi, Zurich
[59] Biskupska, N. and Salamanca, A. (2020). Co-Designing Climate Services to Integrate Traditional Ecological Knowledge: A Case Study from Bali. SEI, Bangkok
[60] Clements, R., Haggar, J., Quezada, A. and Torres, J. (2011). Technologies for Climate Change Adaptation: Agricultural Sector. UNEP Risø Centre on Energy and Climate and Sustainable Development/Practical Action, Roskilde
[61] Taishi Y., Austin S., Kohli R., Sitathani K., (2021). Communities and Local Resilience Outlook. Prepared for the 7th Asia-Pacific Climate Change Adaptation Forum, 8-12 March 2021. Bangkok: Asia Pacific Adaptation Network
[62] Kaika, M. (2017). 'Don't call me resilient again!': the New Urban Agenda as immunology... or... what happens when communities refuse to be vaccinated with 'smart cities' and indicators. Environment and Urbanization, 29(1). 89–102. DOI: 10.1016/j.geoforum.2015.10.012
[63] Bimson K., Kilponen A., (2021). Nature-based Resilience Outlook. Prepared for the 7th Asia-Pacific Climate Change Adaptation Forum, 8-12 March 2021. Bangkok: Asia Pacific Adaptation Network

2.5 Finance and Investment

Building resilience is costly: UNEP has estimated global adaptation investment needs at USD 140–300 billion per year by 2030 and USD 280–500 billion by 2050[64]. This means that access to public finance and the ability to attract private investment will determine, to a great extent, whose resilience is strengthened and whose is not. Inclusion is thus crucial, not only in terms of which countries can get adaptation finance, but also at the community and individual levels. Tools of financial inclusion include a range of instruments, including microfinance, insurance, small loans and mobile banking[65]. The Economic Sector Resilience Outlook discusses in detail the progress, gaps and challenges in strengthening resilience of economic sectors.

Bright Spots

The pool of available adaptation finance has grown in recent years, including through the Adaptation Fund, the Green Climate Fund, the Global Environmental Facility, the World Bank and the Asian Development Bank, among others. There is also a Global Partnership for Climate and Disaster Risk Finance and Insurance Solutions (InsuResilience) to promote climate risk insurance in developing countries[66]. A Southeast Asia Disaster Risk Insurance Facility (SEADRIF) is being piloted as well[67]. Public and private financial institutions are also increasingly requiring that infrastructure and other investments be resilient to a changing climate[68].

Hot Spots

Financing for adaptation still falls far short of the documented need, however, particularly in the most vulnerable countries and communities, and are dependent on external sources[69]. Equally serious is the fact that for every USD 10 of committed climate funds only USD 1 goes for local level climate action[70]. The need is enormous, as adaptation is inherently local, requiring tailored solutions for hundreds, if not thousands, of different places. The logistics are even more complex for island and archipelago nations. Governments also need to invest in broad and inclusive social protection measures to address underlying drivers of vulnerability[71].

Private finance for adaptation, beyond companies' investments in their own operations, is still sparse. Unlike mitigation, adaptation does not lend itself easily to market-based mechanisms[72], and private-sector financial tools specifically for adaptation have been slow to emerge[73]. Insurance against crop failures is still mostly government- and donor-funded, and its market in the region is not yet developed.

[64] UNEP (2016). The Adaptation Finance Gap Report 2016. United Nations Environment Programme, Nairobi. https://climateanalytics.org/media/agr2016.pdf

[65] UNESCAP (2019). The Disaster Riskscape Across Asia-Pacific: Asia-Pacific Disaster Report 2019. UNESCAP, Bangkok, Thailand

[66] See https://www.insuresilience.org

[67] See https://www.seadrif.org

[68] Hallegatte, S., Rentschler, J. and Rozenberg, J. (2019). LIFELINES: The Resilient Infrastructure Opportunity. The World Bank, Washington, DC

[69] Micale, V., Tonkonogy, B. and Mazza, F. (2018). Understanding and Increasing Finance for Climate Adaptation in Developing Countries. Climate Policy Initiative, London

[70] Soanes, M., Shakya, C., Walnycki, A. and Greene, S. (2019). Money Where It Matters: Designing Funds for the Frontier. IIED, London

[71] Anschell, N. and Tran, M. (2020). Slow-Onset Climate Hazards in Southeast Asia: Enhancing the Role of Social Protection to Build Resilience. SEI Report. SEI, Bangkok

[72] Atteridge, A. (2010). Private Sector Finance and Climate Change Adaptation. SEI Policy Brief. Stockholm Environment Institute. https://www.sei.org/publications/private-sector-finance-climate-change-adaptation/

[73] CPI (2019). Global Landscape of Climate Finance 2019. Buchner, B., Clark, A., Falconer, A., Macquarie, R., and Meattle, C. (eds). Climate Policy Initiative, London. https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2019/

National governments in vulnerable countries are struggling to meet adaptation needs. Some funding is only available as loans, not grants, which could heavily indebt countries. Several studies[74] have also shown that corruption negatively affects vulnerable communities' ability to adapt to climate change by taking away important sources of funding[75][76]. Successfully addressing corruption and ensuring that development itself is more equitable and inclusive could free-up more domestic resources for resilience-building, reducing governments' heavy reliance on external funding.

It is also crucial to support resilience-building efforts that are already making an impact even with modest budgets. Well-targeted, risk-free grants to non-governmental organisations (NGOs) and grassroots organisations can significantly increase the resilience of vulnerable groups and support those best positioned to provide urgent and immediate assistance, especially during disasters. More funding is also needed for platforms that support knowledge-sharing and meaningful dialogue with poor, marginalised and climate-vulnerable groups.

3. Building Inclusive Resilience in the Context of COVID-19 Response and Recovery

COVID-19 has severely disrupted efforts to build resilience to climate change, as most in-person activities have been halted, and public budgets have been shifted to public health, social protection and economic stimulus. As the Vatican COVID-19 Commission and Pontifical Academy for Life[77] put it, the pandemic is "exacerbating a triple threat of simultaneous and interconnected health, economic and socio-ecological crises that are disproportionately impacting the poor and vulnerable".

Indeed, COVID-19 has highlighted the structural inequalities that drive vulnerability to both climate change and disease[78][79][80][81]. Like climate change, the virus has disproportionately affected ethnic minorities, socio-economically disadvantaged groups, and the elderly[82]. As discussed in the Economic Sector Resilience Outlook, the economic impacts have been particularly hard on workers in the informal economy, who are often poor and lack access to health and social protection measures. Migrants who returned to their hometowns, in turn, found they were seen as potential carriers of the virus. Women's care work has doubled[83]. Violence associated with lockdowns has been reported in many places.

[74] Lewis, J. (2017). Social impacts of corruption upon community resilience and poverty. Jamba, 9(1). 391. DOI: 10.4102/jamba.v9i1.391

[75] Fredriksson, P. G. and Neumayer, E. (2016). Corruption and Climate Change Policies: Do the Bad Old Days Matter. Environmental and Resource Economics, 63(2). 451–69. DOI: 10.1007/s10640-014-9869-6

[76] Rahman, M. A. (2018). Governance matters: climate change, corruption, and livelihoods in Bangladesh. Climatic Change, 147(1–2). 313–26. DOI: 10.1007/s10584-018-2139-9

[77] Vatican Covid-19 Commission and Pontifical Academy for Life (2020). Vaccine for All. 20 Points for a Fairer and Healthier World. Holy See Press Office, Rome

[78] Bowleg, L. (2020). We're Not All in This Together: On COVID-19, Intersectionality, and Structural Inequality. American Journal of Public Health, 110(7). 917–917. DOI: 10.2105/ajph.2020.305766
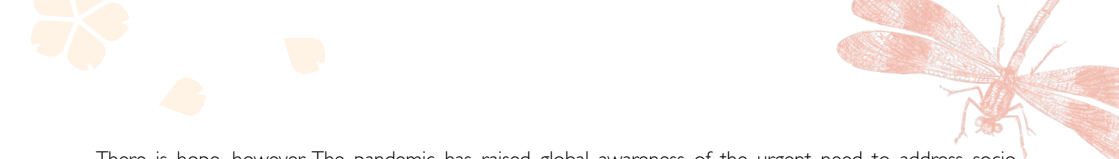
[79] Chen, Y., Senthilkumar, N., Shen, H. and Shen, G. (2020). Environmental Inequality Deepened During the COVID-19 in the Developing World. Environ Sci Technol. DOI: 10.1021/acs.est.0c06193

[80] Marmot, M. and Allen, J. (2020). COVID-19: exposing and amplifying inequalities. J Epidemiol Community Health, 74(9). 681–82. DOI: 10.1136/jech-2020-214720

[81] Patel, J. A., Nielsen, F. B. H., Badiani, A. A., Assi, S., Unadkat, V. A., Patel, B., Ravindrane, R. and Wardle, H. (2020). Poverty, inequality and COVID-19: the forgotten vulnerable. Public Health, 183. 110–11.

[82] Ali, S., Asaria, M. and Stranges, S. (2020). COVID-19 and inequality: are we all in this together? Canadian Journal of Public Health, 111(3). 415–16. DOI: 10.17269/s41997-020-00351-0

[83] Landivar, L. C., Ruppanner, L., Scarborough, W. J. and Collins, C. (2020). Early Signs Indicate That COVID-19 Is Exacerbating Gender Inequality in the Labor Force. Socius, 6. 2378023120947997.

There is hope, however. The pandemic has raised global awareness of the urgent need to address socio-economic, racial and other inequalities, and of the perils of failing to build resilience to major threats. It has also mobilised trillions of dollars in stimulus funds that can be used, at least in part, to build resilience, and led to calls to "build back better", echoing a long time motto in DRR. It is crucial that governments heed those calls.

4. Priorities for Action

The priority actions presented here will be further updated by incorporating suggestions and action-oriented recommendations discussed and explored at the various Inclusive Resilience stream sessions of the 7th APAN Forum.

For the Asia-Pacific region, climate change is an urgent and immediate threat – one that requires not only country-level action, but substantial regional cooperation. APAN provides a key platform to work together to build inclusive resilience across the region. There is a need for an ambitious adaptation and resilience agenda that embodies the commitment of the 2030 Agenda on Sustainable Development to "leave no one behind" and the human rights principles of the Paris Agreement.

Priorities to achieve more inclusive resilience in the region include:

- **Actively ask who is being left out, and bring them in.**

For example, is the development of NAPs and NDCs participatory and inclusive in both design and implementation? If the process is not engaging vulnerable groups, it needs to be changed. Resilience interventions must be evaluated from an intersectional perspective to ensure that the views and concerns of all relevant groups are being addressed.

- **Provide funding, frameworks and tools to support inclusion.**

Proven approaches can ensure that resilience-building efforts led by government and civil society alike engage with specific groups (e.g. children, the elderly, Indigenous Peoples, persons with disabilities, LGBTQI+ and migrants) who are vulnerable to climate change impacts, so they are able to articulate their priorities for inclusive resilience practice in research, policy engagement and capacity-building.

- **Hold duty-bearers accountable for protecting human rights.**

Resilience and human rights go hand in hand; when people are marginalised and denied their basic rights, they become more vulnerable to climate-related shocks. It is crucial to ensure that duty-bearers, specifically governments, fulfil their commitments under human rights treaties, and that people are aware of their rights and are supported in their pursuit and enjoyment of these rights. Respect for the life and dignity of everyone is fundamental to inclusive resilience.