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CLIMATE ACTION



TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

I. SUMMARY

The Asia-Pacific region is currently not on track to achieve the SDG 13 targets. Most vulnerable countries and communities must simultaneously deal with compounding risks associated with climate change and the COVID-19 pandemic. Climate change and climate-induced disasters fundamentally threaten development in Asia-Pacific, often undermining the enjoyment of all human rights, and exacerbating societal inequalities by disproportionately burdening the poor and the most vulnerable groups, including women and children, indigenous populations, gender minorities, migrants, displaced and persons with disabilities. Between 2000-2019, eight out of the top ten countries by disaster occurrence and seven out of ten countries by disaster-affected population are in Asia Pacific.¹

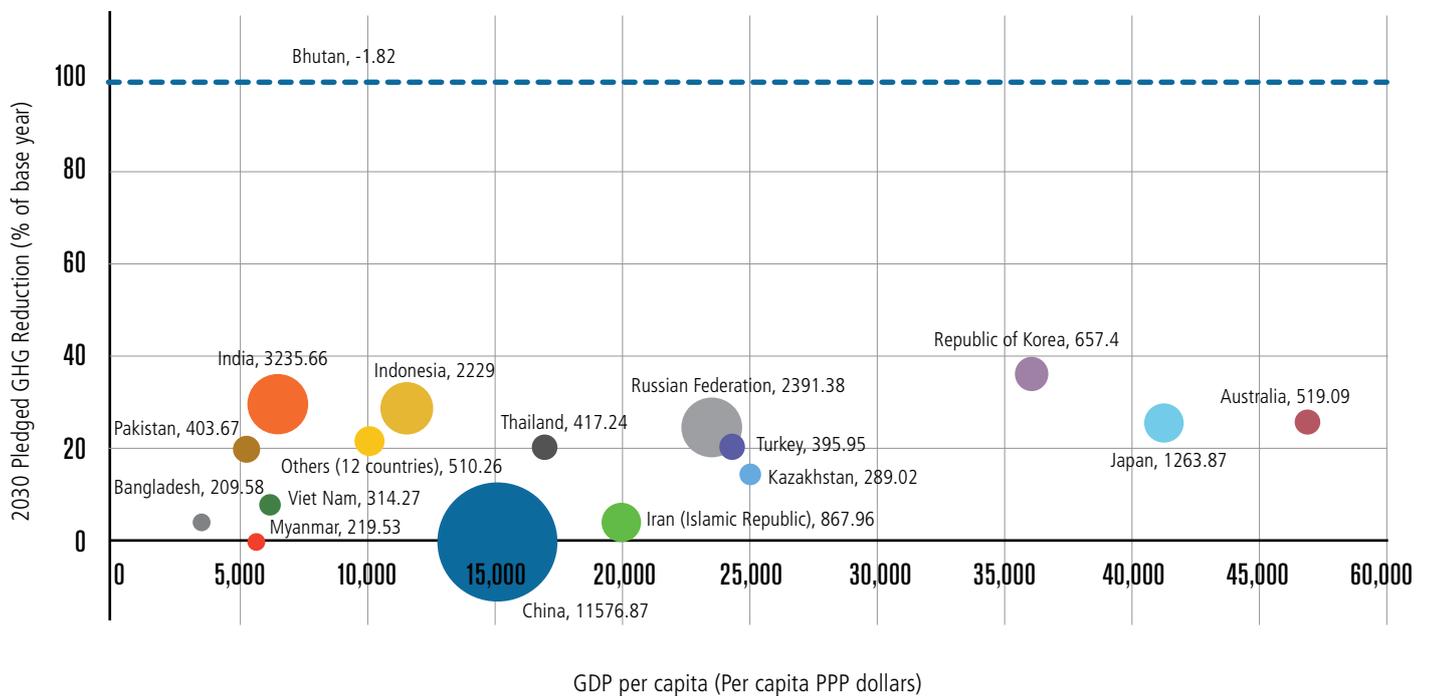
Countries in Asia-Pacific must accelerate ambitious climate mitigation and adaptation actions to safeguard impressive development gains made and to rapidly transition towards an equitable low-carbon and climate and disaster-resilient development path in green recoveries post-COVID-19. Globally, a green recovery could cut expected emissions in 2030 by up to 25 per cent and could increase the chance of keeping temperature rise to below 2-degree Celsius, up to 66 per cent, according the UNEP Emissions Gap Report 2020.²



II. CURRENT STATUS

- Goal 13 on climate action remains unlikely to be achieved at the current rate of change. A record 36.7 GT CO₂ of cumulative emissions were registered in Asia-Pacific in 2019. Though initially stalled by the COVID-19 lockdowns during the first half of 2020, the cumulative GHG emissions in Asia-Pacific have risen to just below 35 GT CO₂. Required global emission reductions are 7.6 per cent per year to keep global temperature rise below 1.5°C. Projected GHG emissions growth to 50 GT CO₂ by 2060 reveals that the Nationally Determined Contributions (NDC) commitments of the countries in the Asia-Pacific region are falling short to support Paris Agreement targets (see figure 1).³

Figure 1: Asia-Pacific comparison of historical GHG emissions to GDP per capita and NDC pledges for GHG emission reduction



Source: ESCAP

- Seventeen countries in the region have submitted NDCs in 2020, while eight countries have announced carbon neutrality targets by 2050 and China by 2060 or earlier.⁴ However 41 countries have yet to make similar pledges. Analysis indicates that all subregions are making limited progress towards the global 2030 target of 29-32 Gt CO₂ emissions reductions per year and the region must reverse negative trends on climate action, particularly on implementation of climate change policies and building resilience and adaptive capacity.⁵
- The disruptions from the coronavirus pandemic have had implications for climate action as both emissions were impacted, and countries have delayed updating and submitting their NDCs. Globally, CO₂ emissions were estimated to have declined in 2020 by 8 per cent, while an 8 per cent reduction was estimated in China alone.⁶ While countries in the region have introduced over 120 new 'green recovery' measures, with most addressing disaster risk management,⁷ most have not yet aligned green, pro-poor and COVID-19 recovery policies affecting energy, transport, air travel and tourism, land use (including forestry and agriculture), water and waste, and disaster risk management with impacts on climate.



- Extreme weather and climate action failure were ranked as top global risks in terms of likelihoods and impact respectively by the World Economic Forum Global Risk report 2020. Typhoons and cyclones such as Harold in the Pacific or Amphan (10 million people affected, 2.8 million homes damaged or destroyed and damage worth USD 130 million, including 2,000 schools)⁸ in Bangladesh underscored multi-dimensional overlapping vulnerabilities as they intensified human and economic impacts and deepened inequalities.
- According to a survey in late 2020, just over 50 per cent of stakeholders are optimistic on overall achievement of the 2030 Agenda at the national level, with 52 per cent rating progress towards SDG 13 good or very good, and the same percentage indicating that progress toward the goal has been impacted by the COVID-19 pandemic.⁹ Nearly 92 per cent of surveyed stakeholders identified policy and institutional coherence as important or very important components to making progress towards SDG 13.

A. AREAS WHERE GOOD PROGRESS IS MADE

Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters (target 13.1)

A number of governments across Asia-Pacific are strengthening preparedness mechanisms and their associated policy environments to better manage disaster risk. Thirty countries in the Asia Pacific ESCAP region¹⁰ formally reported the existence of a national Disaster Risk Reduction (DRR) guidance document (e.g. strategy, policy, plan and/or framework) and at least twelve countries reported¹¹ considerable progress on aligning their DRR strategies with the Sendai Framework for Disaster Risk Reduction between 2015 and 2020.¹² Cambodia and Philippines are the latest countries that adopted DRR strategies in Asia Pacific region in 2020 with considerable degrees of policy coherence with climate change adaptation frameworks. Countries such as Indonesia, India, Lao, Fiji, Papua New Guinea and Kiribati have ensured greater levels of coherence with climate change adaptation during the process of reviewing their disaster risk management laws.

Twenty countries have reported local disaster risk reduction plans, representing 8,572 local governments, developed between 2015 to 2020. In 2020 the Making Cities Resilience 2030 (MCR2030) initiative was launched as a successor to the multi-partner MCR campaign, which engaged more than a thousand cities in the region since 2010.

The Pacific Catastrophe Risk Insurance Company (PCRIC), founded in 2016 by 14 Pacific Island countries to provide innovative insurance policies through a regional catastrophe risk pool issued five insurance policies to three participating countries in a 12-month period spanning 2019-2020. The government of Tonga received a USD 4.5 million payout from PCRIC to deal with the impact of cyclone Harold.¹³

Investments in preparedness planning have allowed countries such as Indonesia, the Philippines and Timor-Leste to launch their COVID-19 response plans ahead of the Global Humanitarian Response Plan.¹⁴ In October 2020, the Association of Southeast Asian Nations (ASEAN) launched the ASEAN Guidelines on Disaster responsive social protection to increase resilience. The integrated approach adopted through these guidelines promotes strengthening, adaptation and expansion of existing social protection systems to anticipate and meet the needs of vulnerable groups and mitigate the impact of potential crises. The ASEAN Committee on Disaster Management (ACDM), which provides policy oversight has, for the first time, included 'gender and social inclusion' among the seven guiding principles and recognized anticipatory action approaches in its ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Programme for 2021-2025.



To enhance coordinated UN action on disaster risk reduction and climate change adaptation, an Issue-based Coalition (IBC) on Building Resilience was established and has progressed on risk analytics and better understanding risk governance mechanisms and disaster displacement dynamics in the region. The IBC developed reports in 2020 to inform COVID-19 response and recovery efforts.^{15,16}

Integrate climate change measures into national policies, strategies and planning (target 13.2)

To support more ambitious NDC implementation and review process countries in the region are strengthening national enabling frameworks in four intertwined and interconnected factors including:

- **mainstreaming climate action in development policies and legal frameworks**
- **enhancing national and subnational coordination**
- **improving national climate finance flows in sectoral budgets and with onboarding private sector**
- **strengthening monitoring and review frameworks for transparency and engagement**

A recent study indicates that almost half of the countries are in the early stages of elaborating the conditions for resource mobilization for NDC implementation and are yet to establish private sector engagement mechanisms. The study found that 54 per cent of the countries that have shown to have well-functioning national and subnational coordination mechanisms have also advanced on developing their national climate finance frameworks, and vice versa, while 38 of 44 developing countries in the region have had climate change-related laws established for more than three years supporting NDCs and climate actions.¹⁷ More than 50 per cent of the countries have put in place basic measures to mainstream NDCs, through a climate change law combined with a SDG 13 strategy/plan/roadmap. Well-functioning Monitoring, Reporting and Verification (MRV) systems are strongly supported by well-developed climate and NDCs mainstreaming frameworks, including legal frameworks. Prior to 2020, a majority of countries in the region¹⁸ had previously conducted climate change vulnerability and impact assessments.

Some countries are reflecting more ambitious climate action and alignment of their various national policies. Bhutan, Fiji, Japan, Maldives, Marshall Islands, Nepal, New Zealand, and the Republic of Korea have made carbon neutrality pledges by 2050, while China has pledged neutrality by 2060 and Singapore has committed to the second half of the century. Mongolia has advanced towards its second NDC, which includes a GHG emissions reduction target that is 14 per cent higher compared to the 2015 business as usual (BAU) scenario.¹⁹ The Russian Federation's ratification of the Paris agreement in 2019 was followed in 2020 by the release of its draft long-term climate strategy; Bangladesh has aligned their commitments to reducing greenhouse gas emissions with the Bangladesh Delta Plan 2100; Papua New Guinea's SDG 13 Roadmap consists of a set of 30 actions, Fiji's Climate Change Bill, which renews commitments is to be enacted in 2021. In November 2020, Viet Nam passed a revised Law on Environmental Protection legalizing an emission trading scheme to take effect in 2022 which will formalize enabling policies such as national greenhouse gas emission inventories, and the monitoring, reporting and verification.²⁰

Gender-responsive climate action has been highlighted by some countries: Cambodia includes six enabling actions for improving gender-responsiveness in general²¹ and key policy priorities of Nepal is to formulate Gender Equality and Social Inclusion (GESI) and Climate Change Strategy and Action Plan, and Climate Resilient Planning and Budgeting Guidelines by 2021, develop gender-responsive local adaptation plans by 2030, and prepare and implement strategy and action plan on gender-responsive climate-smart technologies and practices by 2025.²² In addition, Cambodia and Viet Nam submitted NDCs explicitly integrating aspects of children's well-being and increased climate actions in social sectors including across health, education and water and sanitation that are critical for building climate resilience of poor and marginalized children and communities. Cambodia has prioritized adaptation actions related to resilient infrastructures, resilient cities, end-to-end early warning and community-based disaster and climate risk management.



A number of countries have recognized the significant role of local authorities to contribute to NDCs and national climate strategies. China, India, Viet Nam, Bangladesh, Sri Lanka and the Lao People's Democratic Republic identify specific urban-related commitments in their NDCs.²³ The Philippines is facilitating city-level action through the People's Survival Fund (PSF), a flagship public climate finance programme for Local Government Units to integrate adaptation activities of resilience building and disaster risk reduction in vulnerable local communities. The Philippines' 'Memo 60' allows LGUs to declare a State of Calamity based on a scientific forecast. LGUs will be allowed to access their Quick Response Fund (QRF) for early actions if the forecast shows at least 15 per cent of the population is likely to be affected by the forecasted hazard. The Philippine Red Cross is making use of the LGU's ability and willingness to access funds for its Typhoon Early Action Protocol. The national Climate Change Commission is enhancing vertical integration by working with the Green Climate Fund and the Global Green Growth Institute to strengthen the PSF and accelerate project development.²⁴ India's Smart City Mission has introduced a cities assessment framework for cities to utilize in their climate mitigation and adaptation measures.²⁵

In 2020, Kiribati submitted its National Adaptation Plan to the UNFCCC Secretariat, adaptation communications were submitted by Marshall Islands and Russian Federation, while Fiji and Nepal submitted sectoral and thematic strategies. The UNDP-UN Environment National Adaptation Plan Global Support Programme (NAP-GSP) is providing support to an additional 10 countries in the region.²⁶

Improve education, awareness-raising and human and institutional capacity (target 13.3)

An annual collaborative platform to increase the momentum in achieving the Paris Agreement climate targets in-line with the SDGs is enabled through the Regional Climate Weeks (RCW), organized by UN Agencies with the participation of member governments, non-governmental organizations and representatives from the public and private sectors. The Asia-Pacific Climate Week was organized in 2019, which provided a platform for exchange of knowledge and best practices across the region on Implementation of NDCs, National Adaptation Plans (NAPs), disaster risk reduction and resilience building, Sustainable Development Goals (SDGs), and Global Climate Action (GCA). The next Asia-Pacific Climate Week, delayed from 2020 due to the COVID-19 pandemic, will be held in 2021.

To coordinate the UN response to challenges of climate change and air pollution in the region and support UN Resident Coordinators and Country teams, an Issue-Based Coalition on Climate Change Mitigation and Air Pollution has been established to better support the countries in the Asia-Pacific region to effectively address the transboundary impacts of climate change and air pollution and to reach out to non-UN stakeholders. UNFCCC established the Action for Climate Empowerment (ACE), which includes elements on Climate Change Education, Training, Public Awareness, Public Access to Information, Public Participation, and International Cooperation.²⁷ A number of countries, including India, Malaysia, Philippines and Tuvalu have already incorporated climate change into their education curriculums and adopted teacher training modules on climate. At the ASEAN level, member states implemented commitments on integration of risk reduction and resilience into the education curriculum included in the ASEAN Common Framework for Comprehensive School Safety (ACFCSS) and the ASEAN school safety initiative 2017-2020.

Thirty-two countries in the region have available disaster loss and damage databases. While methodological approaches, geographic scope,²⁸ impact variables, updating and levels of completeness and disaggregation vary from country to country, disaster loss accounting systems enable informed risk assessments and impact-based forecasting.²⁹ Within South-East Asia, the seasonal climate outlook forums are complemented by pilots to use sub-seasonal to seasonal (S2S) climate information improving prediction skills by bridging the gap between weather and climate forecasting.³⁰ The aim is to seamlessly combine climate information across the different timescales, to enable decision makers to assess risks more dynamically and take decisions at different lead times. At the city level, anticipatory action mechanisms have been successfully tested for heatwaves in Hanoi and Karachi, emphasizing the importance of localization of risk information, communication, preparedness and adaptation action.



According to a youth and children consultation led by World Vision International and members of the Asia Pacific Coalition for Safe Schools between 2019 and 2020, 93 per cent of children and youth from participating countries³¹ view climate change adaptation and disaster risk reduction as an important issue, showing high awareness on the issues and a call for participation of children and youth in climate and disaster risk reduction action.

Improving climate finance flows (target 13.a)

Eighteen countries in Asia received a total of USD 4.9 billion for 530 projects and programmes approved by 18 multilateral climate funds and initiatives through 2019.³² As of November 2020, from Asia and the Pacific 18 proposals (6 from LDCs) were submitted to the Green Climate Fund (GCF) and two from least developed countries fund to support the formulation of national adaptation plans. Fourteen countries from the region have entities accredited by the GCF for direct access.³³ In total, GCF has provided USD 2.6 billion to the region.³⁴

At the subregional level in South-East Asia, Pacific, and Central Asia/South Caucasus, as well as selected countries in South and South-West Asia, initiatives such as developing needs-based climate finance (NBF) strategies and Regional Dialogues on Carbon Pricing (REdiCAP) to promote Collaborative Instruments for Ambitious Climate Action (CiACA) are being organized to support Asia-Pacific countries to better understand how to adopt climate finance access strategies and carbon pricing instruments at both national and regional levels will benefit NDC implementation.³⁵

To facilitate climate action, governments and multilateral institutions are scaling up access to climate finance. Bangladesh has announced successful operationalization of its Climate Fiscal Framework resulting in institutionalization of climate related spending tracking since 2015³⁶ showing maximum allocation to food security, social security and health, followed by infrastructure and revealing that 52.62 per cent of the total budget has been allocated to climate change relevant activities during the fiscal year 2019-2020. The Bangladesh Climate Change Trust Fund (BCCTF) has undertaken 789 projects with investment of USD 443 million to implement strategic actions of the prepared Bangladesh Climate Change Strategy and Action Plan in 2009.³⁷

The government of Fiji has embarked on a low-carbon development pathway and engaged in the Regional Pacific NDC Hub, and developed innovative financing such as green bonds to support implementation of its NDC.³⁸ Mongolia, which has developed a GHG emissions reduction target for 2030 that is 14 per cent higher than its BAU scenario of 2015, has been successful in obtaining funding through the GCF, providing low-cost capital for low-carbon technologies and capital for a renewable energy project. The GCF financing is in collaboration with local financial sector, which will result in increased capacities of local institutions to strengthen green investments.³⁹

As part of the Asian Development Bank 2030 strategy to tackle climate change, build climate and disaster resilience, ADB introduced in 2019 contingent disaster financing (CDF) as a new financing mechanism to help its developing member countries strengthen disaster preparedness and provide support via quick-disbursing funds following natural disasters.⁴⁰ In 2020, USD 500 million loan was provided from CDF programs to Indonesia, USD 500 million to Philippines and USD 94 million for the third phase of the Pacific Disaster Resilience Program to help boost disaster resilience in light of the coronavirus disease (COVID-19) pandemic impacts and response to other disaster events such as cyclones and floods.



B. AREAS REQUIRING SPECIFIC ATTENTION AND ASSOCIATED KEY CHALLENGES

Reducing climate and disaster impacts on people in the region (target 13.1)

Between 2015 and 2019, 29 countries in the ESCAP region (25 in Asia and four in the Pacific) reported through the Sendai Framework Monitor⁴¹ that 39,137 people died due to disasters and 104 million people were directly affected during the same period. Regional figures from global disaster loss database CRED EM-DAT⁴² recorded in the Asia Pacific ESCAP region 1,477 disasters events between 2015-2020 in the region which resulted in around 65, 889 deaths and affected more than 773 million people, representing 49 per cent of global disaster mortality and around 77 per cent of affected people globally. While there is a noted decline in disaster-induced mortality due to enhanced preparedness, disaster-induced economic and infrastructure losses are outpacing the region's economic growth and contribute to intergenerational poverty and in equality.⁴³ Across the region, only six countries (Cambodia, Indonesia, Mongolia, Sri Lanka and Turkey, and recently Bangladesh) report sex-disaggregated data on disaster-related deaths and injuries to the international statistical system,^{44,45} and only two sex-disaggregate evacuation data.⁴⁶ Gender data on the proportion of people living in destroyed or damaged dwellings is not reported by any Asia-Pacific country. That hinders evidence-based emergency responses and risk reduction, resulting in policies that often fail to meet the specific needs of women and girls. Enhancing the quality and availability of gender data on disasters and climate change is key to understanding the specific challenges that women face in this regard, and to seize opportunities for women to contribute to climate action.

While economic losses resulting from disasters have exponentially increased, most estimates, at-best, are conservative. For instance, The Asia Pacific Disaster Report 2019 calculated that average annual losses from agricultural drought constitute 60 per cent of total disaster-related losses across the region.⁴⁷ The cumulative impacts of recurring droughts fall disproportionately on the poor and vulnerable, and those reliant on agricultural livelihoods. In South-East Asia, 15 to 25 per cent of the population, a large proportion employed in the agricultural sector, live in areas with recurring drought hazards and face high levels of poverty and malnutrition.⁴⁸

In the first half of 2020, 7.5 million new disaster-induced displacements were registered in the Asia-Pacific region, of which approximately 94 per cent corresponded to weather-related disaster events.⁴⁹ In 2019, of the three million internally-displaced persons due to natural disasters, about 1.1 million of them, or 38 per cent of the total, were children. In 2019 over 19.6 million persons were newly internally displaced due to disasters in the Asia-Pacific region with four countries (India, Philippines, Bangladesh and China) accounting for more than 17 million, while the region accounted for 76.9 per cent of the global new disaster displacement.⁵⁰ In the region's urban centres, where 1.2 billion new residents are expected by 2050, more than half of the population live in low-lying coastal areas.⁵¹ More than 742 million urban residents thus currently face high or extreme multiple hazards from climate-induced disasters that threaten infrastructure and communities.⁵²

Maldives, a climate vulnerable SIDS is developing a national disaster risk reduction and climate change adaptation strategy, supported by UNDRR in partnership with UNFCCC, following global guidance and regional analysis on pathways for enhanced climate change adaptation and disaster risk reduction coherence. In 2020, Viet Nam, Cambodia, and the Philippines launched natural disaster response plans calling for a total of USD 102 million to assist more than 692,000 of the most affected people. Bangladesh launched two plans calling for USD 65 million to assist 1.8 million people.⁵²



Scaling up coherent efforts to foster resilience and reduce emissions (target 13.2)

Recent analysis of NDCs finds that current ambition levels in the Asia-Pacific are insufficient to achieve the targets outlined in the Paris Agreement. Further, less than 25 per cent of countries in the Asia-Pacific are substantially prepared and capable to initiate NDC implementation and have a good basis for a more ambitious NDC review.⁵³

Phasing out coal is a key step in Asia and the Pacific to achieve the goals of the Paris Agreement. During 2020, an increasing number of countries in the region announced new commitments supporting the transition away from coal power, including China's pledge to become carbon neutral by 2060, Japan and the Republic of Korea's commitments to achieve net zero emissions by 2050, the Philippines' moratorium on new coal power, Pakistan's announcement at the Climate Ambition Summit to not approve new coal power plants and Bangladesh's review of moving away from coal-based power plants. At the same time, with 80 per cent of global coal production in Asia and the Pacific contributing significantly to countries' economies and the workforce, formulating socially-inclusive and integrated policies will ensure the just transition of workers and economic policies.

The region faces a particular challenge related to increasing levels of air pollution, which is directly related to emissions and climate action. Air pollution poses an immediate and long-term risk to the most vulnerable populations in the region, especially children. In the East Asia Pacific region, it is estimated more than 90 per cent of children are exposed to levels of harmful ambient air pollution. Many of the conventional approaches to air quality management for large energy producing and industrial sources involve the installation of end-of-the pipe abatement technologies that can mitigate important pollutants such as sulfur oxides (SO_x) and nitrogen oxides (NO_x), but can lead to increases in energy use and GHGs and increase near-term global warming effects.

Improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning (target 13.3)

Preliminary data on climate change education suggests fragmented and slow progress on integrating mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula. A study of 22 countries in Asia showed that the concept of climate change is prevalent in four countries (Afghanistan, Kyrgyzstan, Thailand and Republic of Korea), while eight countries do not mention climate change in any of their education policies and curricula documents.⁵⁴

Since 2015 sixteen countries have reported through the Sendai Framework Monitor on the availability of multi-hazard forecasting and monitoring systems and fourteen have reported on availability of risk information at different levels of sophistication, completeness and coverage. Considering the changing hazard patterns and dynamic nature of vulnerabilities, especially socio-economic, real-time risk analytical capabilities and open data are required to maximize the potential for application of risk information on development and humanitarian action. As highlighted by the COVID-19 pandemic, applications for risk communication and education should also be enhanced to maximize the value of risk information beyond the provision of metrics.⁵⁵

Attention is needed on climate-smart education and enhanced data capacities, including integration of climate data into Emergency Management Information Systems (EMIS) and sector planning and budgeting systems. A number of countries in the East Asia and Pacific region are working to systematically monitor and quantify climate impacts on children's education and be in a better position to articulate climate finance needs and mobilizing international climate funds.⁵⁶



Climate financing flows (target 13.a)

The COVID-19 pandemic has provided an example of an increasingly complex risk landscape further exacerbated by climate change. To ensure risk is at the core of investment decision making, policies including financing should be better used to reduce risks and change incentives. Investments in resilient infrastructure and institutional capacities can help prepare for risks and financing instruments efficiently tailored to better manage risks.

An assessment by ESCAP suggests that 26 countries in the region have not integrated NDC actions in their domestic budget appropriation processes. Additionally, 29 countries have no relevant policy frameworks to align private sector actions with NDCs, while 22 do not have frameworks in place to align lending with actions to achieve commitments in their NDCs.⁵⁷

Based on estimates from 2019, incremental annual investments to enhance climate resilience, mitigation and adaptation roughly USD 395-565 billion is needed through 2030 for Asia and the Pacific, including: USD 176-443 billion to invest in renewable energy (USD 100-320 billion) and improve energy efficiency (USD 76-123 billion). Further, investments in transport (USD 174 billion), information and communication technology (USD 24 billion) and water and sanitation (USD 21-47 billion) sectors are required to ensure climate resilient infrastructure.⁵⁸

At the subregional level, small island developing States (SIDS), countries in the Pacific subregion and least developed countries (LDCs) are projected to face the largest financing challenges. The annual climate-adjusted investment needs for these country groups are expected to be around 1.7-1.9 per cent of gross domestic product (GDP). The East Asia and the Pacific region remains the largest regional provider of and destination for climate finance, rising to USD 238 billion on average per year in 2017/2018 from USD 180 billion in 2015/2016, though the majority of this is still targeted towards mitigation projects. For example, Asian Development Bank prioritizes mobilizing financial resources for tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability for USD 80 billion cumulatively from 2019 to 2030.⁵⁹

Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities (target 13.b)

While climate change affects all people in the Asia-Pacific region, those who have contributed the least to greenhouse gas emissions (i.e. the poor, children, and future generations) are among those most affected. States must ensure that appropriate adaptation measures are taken to protect and fulfil the rights of all persons, particularly those most endangered by the negative impacts of climate change such as those living in vulnerable areas (e.g. small islands, riparian and low-lying coastal zones, arid regions, and the poles). States must build adaptive capacities in vulnerable communities, including by recognizing the manner in which factors such as discrimination, and disparities in education and health affect climate vulnerability, and by devoting adequate resources to the realization of the economic, social and cultural rights of all persons, particularly those facing the greatest risks.

Adaptation and mitigation plans should be publicly available, transparently financed and developed in consultation with affected groups. Particular care should be taken to comply with relevant human rights obligations related to participation of persons, groups and peoples in vulnerable situations in decision-making processes and to ensure that adaptation and mitigation efforts do not have adverse effects on those that they should be protecting.



C. INTEGRATION OF HUMAN RIGHTS AND GENDER EQUALITY CONSIDERATIONS

Women and girls are disproportionately affected by climate-related impacts due to underlying gender inequalities and socio-economic disadvantage⁶⁰ and climate change poses even further risks to human rights and gender equality.⁶¹ In the Asia and the Pacific region where women's livelihoods largely depend on climate-sensitive sectors such as agriculture, women are more vulnerable to climate change compared to men due to inadequate access to essential resources and limited adaptive capacity.⁶² (Target 13.1)

In the Asia-Pacific region, the adverse effects of climate change threaten to undermine the enjoyment of all human rights, including the right to self-determination, the right to life, the right to food, the right to education, the right to health, the right to work, the right to water and sanitation, the right to housing, the right to development and cultural rights, and the rights of those most affected by climate change. Asia-Pacific States were among the first to raise concerns over the issue of climate change at the international human rights fora. The United Nations Human Rights Council, at the initiative of a coalition of small island States, lesser developed countries represented by the likes of Indonesia, the Philippines and Vietnam, and least developed countries represented by Bangladesh, recognized that climate change "poses an immediate and far-reaching threat to people and communities around the world and has implications for the full enjoyment of human rights."⁶³ Integrating human rights in climate actions including NDCs will necessitate higher levels of ambition and improve mitigation and adaptation strategies by making them more effective and inclusive.

Although the majority of countries have carried out climate change vulnerability and impact assessments, only 15 countries in Asia and the Pacific actively engage in processes to integrate gender into the NDCs and climate-relevant planning and policy.⁶⁴ In addition, the national DRR strategies and action plans often frame disability in a limited manner and do not promote the leadership potential of disadvantaged groups, for example people with disabilities, as they are rather seen as passive recipients of aid instead of capable agents.⁶⁵ (Target 13.2)

The lack of participation of women in decision-making within households, in communities and in governments, and especially in environmental decision-making positions, has contributed to lack of gender considerations within climate finance. More funds for climate action are needed, but climate finance needs to be gender responsive. It is important to understand how gender equitable and gender transformative are any benefits from climate investments, but no globally agreed methodology exists.⁶⁶



III. PROMISING INNOVATIONS AND BEST PRACTICES

Monitoring progress on disaster risk reduction and improve damage and loss data management

The Indonesia Bureau of Meteorology and geophysics (BMKG) has piloted the World Meteorological Organization cataloguing of hazardous events (WMO-CHE) initiative,⁶⁷ which addresses the issue of attribution of recorded losses to causal hazards, along with efforts on enhanced post disaster need assessments through digital solutions. This initiative has the potential to enhance the process of damage and loss assessment contributing to advance the goals under the Warsaw international mechanisms on loss and damage.

At the global level, the adoption of the Sendai Framework indicators for monitoring progress on SDGs 1, 11 and 13 is an example of a successful international initiative to achieve greater policy coherence across global frameworks. Integrated monitoring and reporting systems enhance coherence in practice by reducing the transaction costs involved in data collection and reporting while supporting coherent planning and implementation.

Scaling up climate and disaster risk management in humanitarian action to strengthen humanitarian-development nexus

Pakistan has piloted an initiative to integrate disaster risk reduction into the humanitarian programme cycle (HPC). The goal of this approach is to ensure that urgent needs are met while vulnerabilities to future risks and recurrent shocks are reduced. As a result, the humanitarian country team is now considering vulnerabilities and risks within humanitarian response planning to enable actions that not only address immediate needs but also address root causes of humanitarian needs. This approach was piloted in collaboration with the UN Office for the Coordination of Humanitarian Affairs (OCHA) and UNDRR, using guidance developed for the purpose.⁶⁸

In Indonesia, UN agencies collaboratively developed a Joint Programme to support the government in transforming existing social protection schemes into an Adaptive Social Protection system. The programme advocates for a rights-based, equity and gender-sensitive focus to targeting households and individuals which are already below the poverty line, or which are at risk of sliding below the poverty line, in geographic areas at high risk of climate-related disasters – ensuring that no one is left behind in climate action. Within two years, it is expected to have gathered sufficient evidence of the potential to reduce the exposure and enhance resilience of vulnerable individuals and communities to climate-related and other disasters by providing faster, more predictable, effective and accountable cash-based assistance before and/or after a disaster.

Innovative climate financing tools

Australia is well placed to make full use of its diverse resources under the USD 1.9 billion investment package in future energy technologies, including opportunities for the Australian Renewable Energy Agency (ARENA) and the Clean Energy Finance Corporation (CEFC) to reduce emissions and strengthen power generation in Australia, as well as investments in advanced coal technology. In addition, a new Technology Co-Investment Fund to support businesses in the agriculture, manufacturing, industrial and transport sectors to adopt technologies that increase productivity and reduce emissions will be in place.⁶⁹ Bangladesh Bank established a refinance scheme for supporting environment friendly technology such as solar energy, bio-gas plants, and Effluent Treatment Plants (ETP). The initial schemes focused on only 10 products, which has increased to 50 products. Through 2020, 39 banks and 19 financial institutions have signed a participation agreement with Bangladesh Bank to avail finance from this scheme.⁷⁰



The Asian Infrastructure Investment Bank (AIIB) and Amundi, Europe's largest asset manager, have announced a USD 500-million Asia Climate Bond Portfolio which aims to accelerate climate action in the Bank's members and address the underdevelopment of the climate bond market. Through a managed fixed income portfolio of an initial USD 500 million, the joint project expects to mobilize another USD500-million from climate change-focused institutional investors. A portion of the investment proceeds will be allocated to market education, engagement and issuer support. Amundi and AIIB have developed a first-of-its-kind Climate Change Investment Framework, which takes into account three variables, portion of green business activities, climate mitigation and resilience to climate change, to analyze issuers' ability to cope with climate change. Endorsed by the Climate Bonds Initiative (CBI), the framework's approach translates the key objectives of the Paris Agreement into fundamental metrics to assess an issuer's level of alignment with climate change mitigation, adaptation and low-carbon transition objectives.⁷¹

Index-based weather insurance has been a key tool in successful climate financing. An example of deploying such insurance for cascading disasters can be seen in Nagaland, a landlocked state in north-eastern India. The state has invested in developing and scaling up of index-based solutions for multiple perils. In conjunction with the International Water Management Institute (IWMI), Nagaland's government supported developing index-based insurance plans for drought, hailstorms, humidity, and floods. These plans use advanced computation modelling, remote sensing, geospatial gridded datasets for multiple hazards, and crowd sourcing technologies. To scale up the insurance plans, the government partnered with insurance providers such as Tata AIG and Swiss Re to provide a parametric insurance disaster risk financing mechanism that covers the entire state during the monsoon season. This innovative insurance solution has the potential to be scaled up to strengthen disaster resilience, and when combined with a gender sensitive response and risk strategy, can help people become more effective in managing their own risk. Now, flood and drought prone states in India like Bihar are also adopting these insurance models and using similar models to design index-based financing products that support communities manage their risks throughout the disaster cycle.⁷²

The Index-Based Flood Insurance (IBFI) developed by IWMI for multiple hazards, can also potentially be combined with pandemic insurance. For example, a key challenge in the agriculture sector has been the impacts of COVID-19 on farmers where the lockdowns have led to farmers missing harvesting and sowing seasons. This has the potential to drive large-scale fluctuations in food security and nutrition. In lieu of the current and future cascading risks, expanding innovative insurance programmes will have positive knock-on effects on the Sustainable Development Goals and will also contribute to poverty reduction in the sub-region. Another successful example of innovate insurance is in Viet Nam, which introduced forecast-based financing through an Early Warning Early Action approach. This initiative, developed with support from FAO, UN Women and Save the Children, strengthens drought resilience by funding earlier interventions that prepare for and mitigate the impacts of drought rather than simply dealing with the impacts afterwards.

The development of Early Action Protocols (EAPs) is progressing in Asia Pacific. An EAP outlines the roles and responsibilities for implementing early actions that reduce the impact of a forecasted hazard. The EAP for heatwaves in Viet Nam was developed by the Vietnamese Red Cross in close collaboration with IMHEN, the Viet Nam Institute of Meteorology, Hydrology and Climate Change. IMHEN developed the Heat Index, which is part of the trigger for activating early actions, specifically for the EAP and will help to advance impact-based forecasting beyond the EAP. In the Philippines, the Philippine Red Cross (PRC) developed its first Early Action Protocol (EAP) for typhoons, outlining the early actions taken 3 days before a typhoon's landfall. In Bangladesh, the Standing Order on Disasters (SOD) was revised to include of forecast based financing as an innovative approach for anticipatory disaster mitigation and humanitarian action financing.

The Philippine Statistics Authority, building on the DRR expenditure accounts in the Asia Pacific disaster related statistics framework has introduced since 2018 a disaster risk reduction expenditure account which enhances the understanding of government spending in risk reduction action and builds the case for strengthening investments. This has been introduced as part of the country's National Account Systems



satellite accounts. The Southeast Asia Disaster Risk Insurance Facility (SEADRIF) is being established as a regional platform to provide ASEAN countries with financial solutions and technical advice to increase their financial resilience to climate and disaster risks. ASEAN countries are also promoting a social protection system that is responsive to climate and disaster shocks and that can promote longer-term climate resilience of poorest households.

Nature-based solutions for resilience

The 'Sponge City Initiative' presents an opportunity for Chinese cities to implement new integrated water management strategies. Implementation experiences from the batch of 30 pilot cities provide promising examples of a hybrid infrastructure approach to regulate water flow during extreme events such as floods and droughts.⁷³ Scale up of the sponge city approach is expected to help China overcome the most serious water-related issues driven by land-use changes, disappearance of natural wetlands and magnified by climate change related impacts.

In Nepal, the IUCN-led EPIC (The Ecosystems Protecting Infrastructure and Communities project) has contributed to research on bio-engineering techniques establishing demonstration sites for reducing landslide instabilities along roadsides using ecosystem based, locally adapted bio-engineering methods. As a result of the project, the eco-safe roads concept has been integrated into Nepal's nature conservation national strategic framework for sustainable development.⁷⁴

Women's economic empowerment and gender-responsive policy support

Bangladesh, Cambodia, and Viet Nam are building climate-resilient societies and securing sustainable development along with empowering women and marginalized groups by integrating gender into climate-related planning, policies and strategies. Recognizing the obstacles women face for accessing climate-smart technologies, innovations and resources, the initiative, known as EmPower, also supports women entrepreneurs in adopting renewable energy solutions for economic empowerment, leading to greater awareness and collaboration for gender equality, renewable energy, climate change, and DRR-related policies and programs. Overall, the initiative supported by UN Women and the UN Environment Programme, contributes to increasing knowledge on human rights, gender and climate interlinkages improving overall societal resiliency and inclusiveness of climate action.⁷⁵

In Indonesia, the Ministry of Finance and the Ministry of Women Empowerment and Child Protection developed a study on Gender-Responsive Climate Budgeting to assess the existing government's climate change programs and activities through a gender lens with support from the joint UNEP-UNDP Poverty Environment Action for SDGs programme.

Leveraging Energy Tourism to Provide Clean Energy Sustainable Access to Himalayan Communities

Global Himalayan Expedition (GHE) is one of the world's first organizations using the force of tourism coupled with technology to bring solar energy to the remote communities in the Hindu Kush region, as recognized by the World Travel and Tourism Council (WTTC) and the United Nations World Tourism Organisation (UNWTO). GHE conducts "Impact Expeditions" to remote Himalayan villages and uses a portion of the expedition fee to fund the capital cost of the hardware, transportation, installation and training of village-scale solar micro-grids, owned by the communities. Till 2020, in India, more than 3,200 households were CO₂-free, a total solar capacity of 360 kW was set up thereby cutting an aggregate of 35,000 tonnes of CO₂ emissions from these communities. GHE's team is exploring options to replicate this in the Island region of Sumatra, the mountains of Nepal, the forests of Madagascar and the deserts of Namibia.



Develop Child-centred climate vulnerability and risk assessment

Countries could undertake child-centred climate vulnerability and risk assessments that look at the current and future risks of climate change on the education sector. The outcome of the such assessments could provide critical information for decision-makers on the extent and magnitude of likely education risks attributable to climate change, and priority policies and programmes to prevent and reduce the severity of future impacts. UNICEF supported unique child-centred risk assessments in Myanmar and Viet Nam and contributed to data and evidence generation on child-specific climate impact data. Viet Nam's assessment produced commune-level high resolution data on specific climate hazards and children's multi-dimensional vulnerability to climate hazards and built local capacity to collect and use climate hazard and child vulnerability data for better risk assessment and management for most vulnerable children.

IV. PRIORITIES FOR ACTION

Redesign the finance and investment systems to become climate action compatible: The amount of climate financing utilized in Asia-Pacific is increasing year on year; countries in East Asia and the Pacific are the largest receivers of climate finance flows, 41 per cent or USD 238 billion in 2017-2018. To elevate the levels of climate finance a favourable environment must be fostered to incentivize such investment. This includes engagement of private sector and increasing accessibility of climate finance to generate demand. Several important measures need to be undertaken, including:

- A thorough subsidy reform to eliminate fossil fuel subsidies coupled with SDG 7 roadmaps
- Incorporate climate action conditionality in post-COVID19 recovery packages to prohibit investments in carbon-intensive activities
- Robust enforcement of the polluters' pay principle, including through the establishment of carbon taxes/carbon pricing instruments and fostering of sub-regional and regional carbon markets
- Working with private finance sector to integrate climate action and risks into their operations

Seize COVID-19 recovery opportunities to accelerate climate and disaster risk reduction action: The national COVID-19 recovery initiatives provide a window of opportunity for green, healthy, safe and more resilient recovery. There is potential for leveraging climate actions from mitigation, adaptation and resilience-focused efforts in line with the Paris Agreement with co-benefits for realization of multiple SDGs, across all levels (local, sub-national, national, sub-regional, regional) over the short, medium and long-terms. Climate actions can leverage co-benefits in areas of, inter alia, air pollution (including transport, energy) – and contribute to multiple Sustainable Development Goals. To leverage recovery opportunities a review of climate and disaster risk governance mechanism (laws, policies and strategies) at central and subnational levels is recommended to ensure better coherence across the various frameworks and the adoption of a multi hazard approach.⁷⁶

Increase ambition levels in Nationally Determined Contributions: The path to achieving safe climate is the one where countries undertake ambitious climate action to achieve Paris Agreement compatible 1.5°C emissions pathways, which are also aligned with the SDGs. This will entail that emissions peak in 2020-2021, and then with sufficient measures for mitigation, the emissions decline by 45 per cent by 2030 and reach net-zero by 2050. Most recent NDC updates from the region show ambitions towards achieving the latter target and it is imperative for the other regional countries to



follow suit with ambitious pledges and NDC reviews in 2021. Those can well be aligned with green and inclusive, pro-poor, post-COVID-19 recovery strategies for achieving both human and planetary health. Since emissions from fossil fuels constitute the sizeable amount of the overall regional emissions, it is important for the countries in the Asia-Pacific region to embark on a path of decarbonization of power generation by 2050. One key factor to achieving this scenario is increasing the share of renewables by a factor of six, reaching a minimum of 60 per cent and above by 2050. The co-benefits of such a pathway are numerous, ranging from creation of new jobs, fostering new revenue streams and opportunities for economic growth and business development, to drastic reduction of air pollution with direct and indirect impact on health, including prevention of over 7,000 coal-related deaths and close to 60,000 PM 2.5-related deaths in South-East Asia⁷⁷ for example, to access to more affordable and clean energy sources and poverty reduction.

The Third Forum of Ministers and Environment Authorities of the Asia Pacific, which was held from 24 to 25 January 2019 in Singapore demonstrated that there is political will in the region to scale up low emission and climate resilient development and recognised that the NDCs provide an opportunity to support such pathway, as well as green building action plans, regional and global coordination for science and technology transfers including for energy efficiency and for monitoring of greenhouse gas emissions using satellites.

Development of roadmaps to affordable and clean energy, as was developed by Indonesia for example, would allow countries in Asia-Pacific to design best scenarios for the energy production, energy supply, and energy use in industry, transport and housing to achieve net zero emissions, develop renewable energy business options, ensure access to affordable and clean energy for all and create new job opportunities.

Enhancing institutional frameworks, adopting a whole-of-society approach and integrating the NDC commitments in sectoral and subnational budgets will ensure gains in implementation and further raising the ambition of the second editions of the NDCs. Engagement of public sector in developing climate finance strategies would ensure mobilization of domestic financial resources needed for implementation and upscaling of NDCs, as for example is achieved in the Philippines with the strategy for a just transition to a zero emissions society and promoting green jobs.⁷⁸

Integrate climate change and disaster risk reduction into public financial management and private investment: Urgent action is needed to understand risk, prevent new risks, reduce existing risk and adapt to a changing climate by strengthening coherent climate and disaster risk governance systems and develop evidence-based and inclusive policies that are linked to financial resources. Measures noted below, can also be used to strengthen the climate dimension of National Integrated Financing Frameworks:

- Adoption of tools to support such action including Climate change financing Frameworks; Climate Public Expenditure and Institutional reviews; and Climate budget Tagging.⁷⁹
- Action that encourages private investors and banks to strategically align their investments with the goals of the Paris Agreement and the SDGs and scale up their contribution to the achievement of both. This can be done through encouraging participation and adoption of relevant initiatives such as the Principles for Responsible Banking; Principles for Positive Impact Finance; Sustainable Stock Exchange Initiative, UNEP Finance Initiative which mobilize private sector finance for sustainable development and already has 60 banks and insurance companies from the region as members. There are also opportunities to scale up blended finance. While blended financial tools exist in the region, the conceptual understanding and implementation knowledge is limited, especially among SIDS and LDCs who need readiness support to develop such tools and access relevant funding mechanisms. Innovative schemes can include launching carbon pricing instruments, such as emissions trading systems or a carbon tax to incentivize industries to reduce emissions.



Tools such as green and catastrophic bonds and integration of climate change and disaster risk reduction into business operations should be promoted.

- Increase institutional capacity of governments, civil society, public and private stakeholders to develop 'bankable' proposals that enable harnessing co-benefits for human rights and gender equality and allow investors to make gender-responsive climate-related investments (for instance, through creating climate finance training in universities, taking down barriers hindering women's access to climate finance). Support to youth-focused and youth-led organizations can be prioritized, given their active role in implementing climate solutions on the ground and the intergenerational inequity caused by the climate crisis. Developing countries, especially small island developing States, least developed countries and climate vulnerable areas, will require 'readiness' support to accredit direct access entities and help them develop successful GCF proposals. Finance reporting needs to be improved and climate finance flows need to become more transparent to address the gap between pledged and received resources. This can be supported by engaging civil society in the review of proposals.

Strengthen climate information services for vulnerable sectors and communities, integrate human rights approaches, and develop gender-responsive monitoring systems, data collection and application: Investment in climate and disaster risk assessments and disaster loss accounting systems, with strong emphasis on vulnerability analysis and sex-, age-, and disability-disaggregated data (SADDD) collection can be strengthened to ensure that vulnerable populations (children, gender minorities, migrants, displaced etc.) and social sectors crucial to them (e.g. health, education etc.), are reflected in climate and disaster risk management and policies and investments. Shortfalls of sex-disaggregated data and lack of gender analysis undermines relevant policymakers and agencies to address the disproportionate climate-related impacts on women and that inevitably leads to gender-blind policies, planning, and strategies. National environmental and disaster statistics and disaster forensic capabilities can be improved to identify gender and socio-economic impacts of past extensive and intensive disasters, assess costs and benefits of disaster risk reduction investments and improve the accuracy of future disaster risk impact modelling that takes into account diversities across population groups. Voluntary National Reviews (VNRs) can also be used to assess and present progress on achieving climate and disaster resilience goals. Ministries responsible for managing monitoring systems and data collection should leverage existing platforms and mechanisms to strengthen coordination and data sharing across sectors, civil society, and other stakeholders.

A human rights-based approach should be integrated in any climate change adaptation or mitigation measures, such as the promotion of alternative energy sources, forest conservation or tree-planting projects, resettlement schemes and others. Affected individuals and communities must participate, without discrimination, in the design and implementation of these projects. They must have access to due process and to remedy if their rights are violated.

Investments in environmentally and climate friendly technologies can especially benefit women with green job opportunities: To address the widening gaps of gender equality and to reduce greenhouse gas emissions, women's economic empowerment through green jobs could be a priority for COVID-19 recovery. One promising area for this is improving women's access to renewable energy solutions. Decentralized renewables for energy access (DREA) provide opportunities to open new economic potential for the poor as well as unlock resilient livelihoods for communities, including women, through access to electricity for irrigation, processing equipment or early warning systems.⁸⁰ Investment in environmentally friendly technologies, eco-based adaptation, climate-smart agriculture and climate-resilient food system is also crucial to help vulnerable people and to build climate-resilient societies.



Enhance the capacities of local governments to accelerate climate actions: Multilevel climate action is essential to leverage local climate action and contribute to NDC implementation. Decentralization, supported by clear governance frameworks, can be a key enabling instrument to enhance collaborative climate action among national and subnational authorities and develop shared responsibilities that may reduce the burden on central governments.⁸¹ Support for financing of subnational actions is essential to capitalize on local mitigation and adaptation opportunities, including through energy efficiency, public transport and resilient urban infrastructure.

Mainstream Climate Change in Education for Sustainable Development: Climate education, including from a human rights-based approach perspective, needs to be mainstreamed across all aspects of education systems to ensure strengthened understanding of the risks and remedial measures that can be taken at the national level. The five priority action areas include: advancing policy, transforming learning environments, building capacities of educators, empowering and mobilizing youth, and accelerating local level actions.⁸² Universities can be supported to teach and study climate change mitigation and adaptation options, and communities can be encouraged and enabled to apply best practices, as suggested for example in the UNESCO Green Academies brochures (available in Burmese, Chinese, English, French, German, Indonesian, Laotian, Malay, Thai, Vietnamese).



TARGETS

13.1

Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

13.2

Integrate climate change measures into national policies, strategies and planning

13.3

Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

13.3a

Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly USD 100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible

13.3b

Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities



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