CLIMATE FINANCE IN ASIA

Assessing the state of climate finance in one of the world's most climate vulnerable regions

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Asia is particularly vulnerable to climate hazards including extreme temperatures, flooding, droughts, cyclones, and sea level rise. The most vulnerable communities need financial support to help adapt to the climate crisis – they cannot do so alone. Developed countries have promised $100 bn in climate finance to developing countries every year until 2025. This promise has not been met. Asian countries have outlined the support they require and delivering on these needs is integral to bringing climate justice to those most vulnerable to – yet least responsible for – the climate crisis. We find that the climate finance provided to Asia is woefully inadequate to support the necessary adaptation actions and vulnerable communities are suffering as a result.

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For further information on the issues raised in this paper please email advocacy@oxfaminternational.org

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Cover photo: Zohora Begum (92) walks along a muddy road in Kholpetuya village, searching for food for her grandchildren after cyclone Amphan struck western coastal areas of Bangladesh on May 13, 2020. Credit: Fabeha Munir/Oxfam, 2020

SUMMARY

The climate crisis continues on a shocking trajectory, with record annual global emissions leading to increasing rates of global warming. The world has already seen anthropogenic warming of +1.2°C and warnings have come time and again of the dangers of allowing temperatures to rise further.

While keeping the world to just +1.5°C warming on average is the current ambition of the Paris Agreement, this belies the stark regional differences inherent in such a scenario. Different regions of the world will warm at different rates, be impacted in different ways, and will react differently to the new realities they face.

The complexities of the climate crisis are no better exemplified than in Asia. As a diverse region with hot-humid, tropical, and sub-tropical climatic profiles, Asia experiences many weather-related phenomena, from cyclones and monsoonal rains to heatwaves and droughts. Reducing the risk of such events has been an important ambition for governments and development actors alike. However, the challenges of doing so are being compounded as the atmosphere and oceans continue to warm.

The Intergovernmental Panel on Climate Change (IPCC) has laid out in its latest Assessment Report the stressors and associated risks from the climate crisis to Asia (see box 1). Here, high exposure to climate impacts is coupled with a socio-economic context that results in large numbers of communities being highly vulnerable to climate change. Half of the world's population lives in the region and many are on the frontline of the crisis. In the 18 countries in Asia incorporated in this study,[1] half the total population lives below the $5.50 a day poverty line. Impoverished people are far more vulnerable to climate shocks and less prepared to deal with and adapt to the new situations they face. Other marginalised communities are also highly vulnerable, with gender and age being key demographic factors governing an individual's climate vulnerability.

Box 1. Key Regional Climate Stressors (and Risks)

- More frequent temperature extremes and heat waves
  (Heat stress – particularly megacities)
- Decreasing glaciers
  (Glacier lake outburst floods, reducing water resources)
- Greater drought risk / decreasing precipitation / monsoon alteration
  (Water & food shortages)
- Increasing extreme events – cyclones, rainfall
  (Flooding, Infrastructure damage)
- Higher than global mean sea level rise
  (Flooding, storm surges, water salinization, soil erosion)
- Average temperature increase
  (Biome changes & related agricultural / fisheries impact, wildfires)

Source: Intergovernmental Panel on Climate Change (IPCC). (2022). Sixth Assessment Report.

The effect of extreme exposure and vulnerability can be seen in recent examples of climate-related events such as the devastating 2022 Pakistan floods. Caused by extreme monsoonal rains which have been altered by a warming climate and compounded by heavy glacial melt related to extreme heatwaves earlier in the season, the floods and their impacts mean many people are pushed into poverty or have had their poverty entrenched.

The ND-GAIN index provides a valuable indication of a country's vulnerability to and readiness for climate change. Afghanistan scores the lowest of any of the countries in the region, followed by Bangladesh, Myanmar, Cambodia, and Pakistan, in that order. All these countries are Least Developed Countries (LDCs) – the poorest in the world, with the exception of Pakistan.

Of the 18 countries this report analyses, 8 are LDCs, 6 are Lower-Middle Income Countries (LMICs), and 4 are Upper-Middle Income Countries (UMICs).

The 18 Asian countries analysed are collectively responsible for 42% of current global emissions, dropping to just 15% when Chinese emissions are excluded. Countries such as Afghanistan, Bangladesh, Bhutan, Cambodia, Laos, Myanmar, Nepal, and Timor-Leste (all LDCs) have contributed negligible amounts of greenhouse gas (GHG) emissions to the atmosphere. And yet, they are among the most affected by the climate crisis today.

This injustice must be corrected by the delivery of climate finance to where it is needed most – in particular to enable adaptation to the coming impacts. It is estimated that the annual cost of adaptation globally will be between $280-500 billion by 2050. In contrast, if developing countries are not supported to adapt, the cost of the losses and damages accrued from the climate crisis could reach $1-1.8 trillion by the same year. Continued inaction and delay only makes these expenses rise.

Support to developing nations was promised in the form of $100 bn per year in climate finance from 2020 onwards. It is now clear this promise was broken – only $83 bn was committed in 2020. Despite the promise of delivering the $100 bn over a delayed timescale (i.e., by 2023), this again highlights that climate pledges are so often not backed up by appropriate action.

As international talks turn from outlining ambitions and pledges to delivery and implementation, it is important to assess the quantity and quality of climate finance being delivered to Asia – the purpose of this study.

In official reports to the United Nations, many of the nations in question have outlined the financial support they require to deliver appropriate mitigation (emissions reduction) and adaptation actions by 2030 - their "costed needs". To fully deliver these needs, the countries collectively require $1.3 trillion per year, every year up to and including 2030 (dropping to $371 billion per year when China is factored out). It is important to note that costed needs are expected to come from various public and private sources, from both domestic and international providers.[2]

While private and domestic public finance has a huge role to play in filling the costed needs gap, international public sources represent the majority of finance to which LDCs have access. Currently, this finance falls woefully short of what is required. Over the eight-year period 2013-2020, an average of just $14 bn per year was committed in climate finance to the 18 Asian countries.

However, much of this finance is provided in the form of loans and other debt instruments. Bilateral providers committed only 18% of their climate finance to the region through grants ($1.2 bn per year on average), the remaining 82% were offered through concessional loans and other debt instruments ($5.4 bn per year ave.). In contrast, multilateral providers (e.g., the World Bank, Asian Development Bank, Green Climate Fund, etc.) committed just 5% of their climate finance in the form of grants ($0.4 bn per year ave.), and the remaining 95% through loans and other debt instruments ($6.7 bn per year ave.). Furthermore, multilaterals delivered 67% of these debt instruments using non-concessional terms ($4.5 bn per year on average), i.e., lending at close to market rates.

The use of such financial instruments risks plunging countries already struggling with debt burdens into further financial difficulty. This is counterproductive to the originally intended purpose of climate finance. The objective of enhancing climate resilience and the adaptive capacities of developing countries is undermined when those countries find themselves

redirecting money to service debt burdens – money which could otherwise be used in delivering public services, such as in schools and hospitals. Deterioration of these services places nations in ever more climate-vulnerable situations.

To give a fairer picture of the net value of this climate finance to developing countries, it is possible to calculate the grant equivalent value of the flows received. This measure shows that just 43% ($6.1 bn) of the originally calculated $14 bn annual average can be considered as grant equivalent finance.

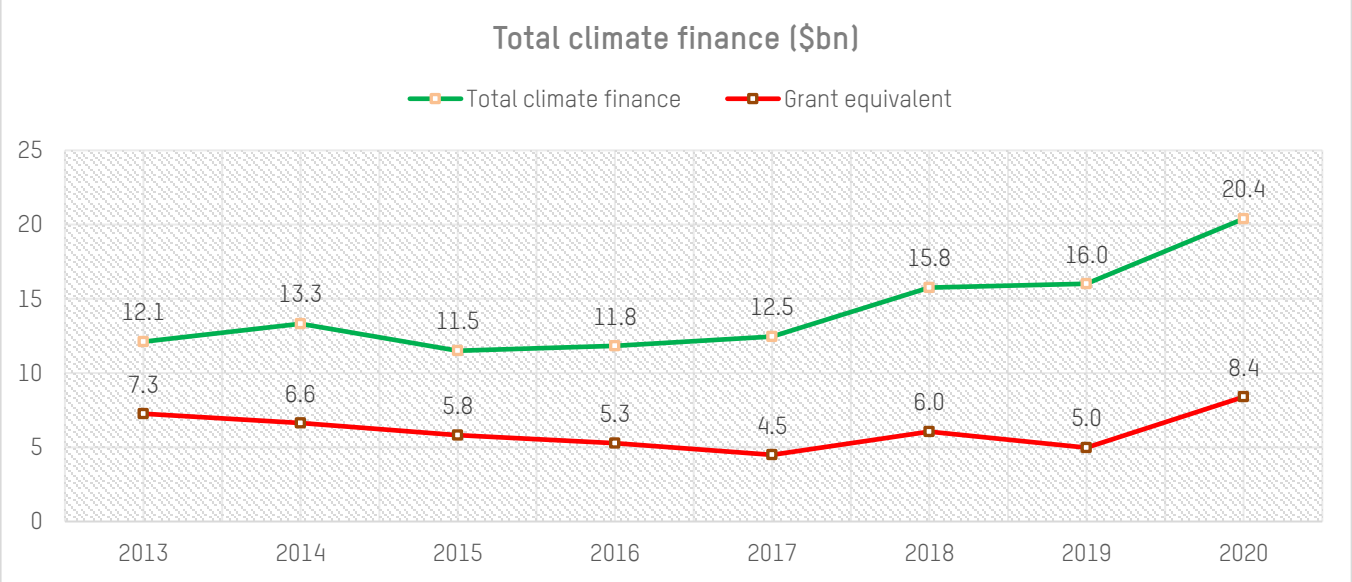

Figure 1: Total climate finance committed to 18 Asian recipient countries and the grant equivalent of that finance over a 2013-2020 time series. All figures in USD billions.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

A further key aspect of the $100 bn pledge was to deliver a 'balanced' amount of mitigation and adaptation financing. Disappointingly, the amount of adaptation financing committed to Asia has made up just one third of the total climate finance, compared to two thirds of mitigation financing between 2013-2020 – representing a clear imbalance. While this picture is improving somewhat – with 43% of 2020 commitments targeting adaptation objectives, the need for scaled-up, grant-based adaptation finance is glaringly apparent.

If this under funding of climate finance pledges and the outlined needs of developing countries continues, rich countries risk devaluing international climate agreements and the vital ambitions therein that aim to mitigate the worst impacts of the climate crisis.

KEY FINDINGS

1. At its face value, $113 billion in climate finance was committed to Asia between 2013-2020, an average of **$14 billion per year**. 47% of this was provided through bilateral finance, compared to 53% from multilaterals.
2. Annual climate finance commitments have **risen from $12 bn in 2013 to $20.5 bn by 2020**. In 2020, this equated to approximately one quarter of global public climate finance.
3. Of the $113 bn committed between 2013-20, the total **grant equivalent** value of climate finance was just $49 bn (43%), or an **annual average of $6.1 bn**.
4. On average, **bilateral providers** have a **64% grant equivalence**, compared to just **20%** for **Multilateral Development Banks**.
5. **Japan** is the largest bilateral provider of climate finance to the region, committing **$28.2 bn** between 2013-2020. **70%, or $19.8 bn** is estimated to be grant equivalent. The **Asian Development Bank** is the largest single multilateral provider of climate finance to the region, committing **$24.6 bn** between 2013-20, **$17.6 bn** of which is attributable to developed country sources. However, **only 12% of the $17.6bn, or $2.1 bn,** is estimated to be grant equivalent. The World Bank contributed $30 bn in climate finance attributable to developed country sources, with **$15.1 bn** from **International Bank for Reconstruction and Development** (0% grant equivalence) and **$15.0 bn** from **International Development Association** (51% grant equivalence).
6. Over the period 2013-2020, **two thirds** of climate finance in Asia was directed to **mitigation** objectives, compared to **one third for adaptation**.
7. While the **mitigation-dominated** sectors of Transport & Storage (32%) and Energy (26%) are the largest to receive climate finance, certain **other sectors are experiencing high growth**, namely, Health (+427%), Business & Other Services (+336%), and Emergency Response (+218%).
8. The cumulative **costed needs** of Asia according to recipient country UNFCCC reports is **$11.8 trillion** by 2030 (or $1.3 trillion each year for the next 9 years), dropping to **$3.2 trillion** (or $372 bn per year for 9 years) when excluding China's costed needs.
9. There has been a **promising uptick** of +28% in climate finance committed in the final year analysed (2020) compared to the previous year, though this remains **well below the trajectory required** to meet costed needs by 2030.
10. **Estimating costed needs is a challenge** for many governments, resulting in a range of methodologies and subsequent estimates. There is a **lack of standardisation** of costed needs in UNFCCC reporting mechanisms.
11. **41%** of Asian climate finance has **gender integrated** into the programmes funded, compared to 21% with no gender integration, and 38% which is not screened for gender equality objectives at all.
12. The degree to which finance is locally led is difficult to assess due to the lack of transparency on this information. Attempts to estimate this suggest that only about **0.5%** of total finance is **locally led**.

RECOMMENDATIONS

Recommendation 1: International climate adaptation finance to the climate vulnerable regions of Asia is scaled-up.

- **a.** Adaptation finance to each Asian recipient country is doubled by 2025 in line with the goals of the Glasgow Climate Pact.
- **b.** All providers to the region commit to significantly increase grant-based finance and ensure that adaptation constitutes a minimum of 50% of their overall public climate finance contribution. This finance should be allocated in a way that is pro-poor, gender transformational, and prioritises those who are most vulnerable.
- **c.** Adaptation finance is delivered to Asia in line with the eight Principles for Locally Led Adaptation.[3]
- **d.** A new goal specifically for adaptation is included as a component of the New Collective Quantified Goal on Climate Finance (post-2025 goal).

Recommendation 2: The accounting standards of the providers of climate finance are improved.

- **a.** Bilateral providers of climate finance to Asia report grant equivalence as mandatory in the UNFCCC's transparency reporting framework.
- **b.** Bilateral parties agree that non-concessional finance will not be counted towards UNFCCC climate finance obligations.

Recommendation 3: The quality of costed needs assessments is prioritised for improvement by all countries.

- **a.** Asian nations collaborate and advocate for a standardised costed needs reporting format to be included in Nationally Determined Contributions.
- **b.** Technical assistance is provided to developing countries in Asia to enhance the quality and accuracy of costed needs assessments.
- **c.** Asian nations ensure they provide clarity over their conditional vs. unconditional costed needs.

1 THE CLIMATE CRISIS IN ASIA

Globally, temperatures have risen between 1.1-1.2°C in the last ~130 years (since 1880-1900 baseline) and show no signs of slowing.[4]

Under an optimistic future scenario aligned to the goals of the Paris Agreement, the Asian landmass is predicted to warm by 2°C by 2050 and remain at that level until the end of the century. In contrast, if business continues as usual with emissions unabated, summer temperatures are projected to increase 6°C by 2100 and continue that trajectory in the next century.[5] Current conditional and unconditional policy pledges suggest that future temperatures will rise to levels somewhere in between.[6]

While these projections point towards future catastrophe and the potential for societal collapse, the very real impacts of just a +1.2°C world are being realised across the developing world already. The global costs of adapting to climate change and avoiding much of the potential damage were estimated by UNEP in 2016 to total between $140-300 billion by 2030 and $280-500 bn by 2050. The most recent update of the report elaborates that even under ambitious future scenarios where we bring emissions under control that we are now on target for the upper range of these estimates.[7]

Without these adaptation efforts, losses and damages related to both fast and slow onset climate events accrue at alarming rates, with estimates that the cost of residual damages in developing countries were between $116-435 billion in 2020 and projections that these will rise to between $1-1.8 trillion by mid-century.[8] Furthermore, a range of non-economic losses and damages (NELD) will accumulate, such as loss of culture, identity, and biodiversity, that are very rarely factored into considerations of future warming scenarios.[9,10] The cost of not adapting to climate change is far higher than the alternative.

Developing countries are particularly vulnerable to the impacts of climate change, due to their lower adaptive capacity and socio-economic resilience combined with their oft-greater exposure to climate risks.[11,12]

Half the global population lives in the 18 Asian recipient countries in this study. Of this population, 50% lives below the $5.50 per day poverty line, with 9% living below $1.90 per day.[13] According to various metrics, many of the most exposed countries in the world to climatic risks are based in Asia. The region contains 6 of the 10 countries most affected by extreme weather events since the turn of the century, namely Myanmar, Philippines, Bangladesh, Pakistan, Thailand, and Nepal.[14]

This extreme risk exposure, coupled with high-density, massive populations, developing and emerging economies, rampant inequality, and an increasingly complex geopolitical situation, paints a picture of a region which will have climate change as a fundamental driver of its future pathway, whether it likes it or not.

1.1 SOCIOECONOMIC CONTEXT

Asia is made up of a mix of least developed, developing, emerging, and developed nations, pointing to its great diversity. These varying contexts result in differing vulnerabilities and resilience characteristics associated with the climate crises being faced. This study focusses on 18 developing countries in the region, i.e., those receiving support through international climate finance (see Box 2).

Box 2. Asian countries included in this study
Afghanistan, Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Laos, Malaysia, Maldives, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Timor-Leste, and Vietnam.

The region represents a vast area of 18.5 million km^2 and a population of nearly 4 billion people, which could expand to up to 5.2 billion by 2050. Its people are increasingly moving to urban, coastal areas.[15] Some of the world's largest cities are situated in Asia, including megacities New Delhi (28.5 mn), Shanghai (25.5 mn), Mumbai (20 mn), Beijing (19.5mn), Dhaka (19.5mn), and Karachi (15.5mn), among others.[16] While the number of people in Low-Elevation Coastal Zones (LECZs) is expected to expand from under 300 million in 2000 to over 650 million in 2060.[17]

Of the 18 nations, 8 are Least Developed Countries (LDCs), 6 are Lower-Middle Income Countries (LMICs), and 4 are Upper-Middle Income Countries (UMICs). The poverty levels range from 91% below the $5.50 poverty line in Timor-Leste, to just 1.4% in Malaysia, while GNI per capita ranges from $510 in Afghanistan to $12,445 in China (see Table 1).

The region is collectively responsible for 42% of annual greenhouse gas emissions. This largely a result of the growing economies of China (27%) and India (7%). As the region continues to emerge economically, the need for the green transition becomes more and more apparent.

	18 Asian countries (Country Code)	DAC Economic Classification 2022	Population 2021 (millions)	GNI 2021 (billion USD)	GNI per capita 2021 (current USD)	Headcount below $5.50 Poverty line (%) - 2019	Headcount below $1.90 Poverty line (%) - 2019	Gender Inequality Index Global Rank (/189) - 2019
	Afghanistan (AFG)	LDC	40	20**	510	No data	No data	157
	Bangladesh (BGD)	LDC	166	438	2,635	76.0%	6.6%	133
	Bhutan (BTN)	LDC	0.8	2**	2,821	29.0%	0.7%	99
	Cambodia (KHM)	LDC	17	26	1,505	No data	No data	117
	China (CHN)	UMIC	1,412	17,577	12,445	14.1%	0.2%	39
	India (IND)	LMIC	1,393	3,124	2,242	87.5%***	22.5%***	121
	Indonesia (IDN)	LMIC	276	1,155	4,177	52.2%	2.7%	113
	Laos (LAO)	LDC	7	18	2,397	69.5%	9.4%	82
	Malaysia (MYS)	UMIC	33	362	11,024	1.4%	0.0%	59
	Maldives* (MDV)	UMIC	0.5	4	8,148	2.0%	0.0%	78
	Myanmar (MMR)	LDC	55	63	1,156	47.4%	0.9%	110
	Nepal (NPL)	LDC	30	37	1,230	67.9%	4.8%	135
	Pakistan (PAK)	LMIC	225	342	1,517	76.0%	4.3%	104
	Philippines (PHL)	LMIC	111	408	3,676	56.1%	3.8%	123
	Sri Lanka (LKA)	LMIC	22	83	3,722	37.3%	0.6%	90
	Thailand (THA)	UMIC	70	488	6,979	6.2%	0.1%	80
	Timor-Leste* (TLS)	LDC	1.3	2	1,770	91.4%	21.0%	-
	Vietnam (VNM)	LMIC	98	347	3,531	19.9%	1.4%	65
	Total	-	3,959	24,495	-	50.7%	8.9%	-

Table 1: Country statistics for the Asia region taken from a range of sources – most recent year available presented.

*Denotes Small Island Developing State (SIDS).
**Most recent year available of 2020 used.
***2011 Data latest available for India from PovcalNet (World Bank).

Sources: Country codes, Economic Classification, Region, and Net ODA received from OECD.stat; Population and GNI statistics from World Bank Data website; Poverty statistics from PovcalNet (World Bank), Gender Equality Index data from UNDP (OECD.stat, 2022; PovcalNet, 2022; UNDP, 2022; World Bank, 2022).

1.2 CLIMATE PROFILE AND CURRENT & PROJECTED IMPACTS

South Asia is characterised by hot humid, tropical, and subtropical climatic profiles, while South-East Asia is primarily tropical (Peel et al., 2007). The Asian monsoon is the dominant annual climatic feature, while tropical cyclones are major drivers in both the Indian and Pacific Oceans.[18] The continent has a range of biomes and geographical features including the world's largest mountains, as well as various rainforests, savannas, deserts, plateaus, glaciers, rivers, lakes, and deltas.

KEY CLIMATE STRESSORS (AND RISK)

Climatic impact-drivers (CIDs) of increasing temperatures, sea level rise, increasing precipitation, monsoonal alteration, droughts, evapotranspiration increase, ocean warming, and stratification have combined to contribute to a series of climate impacts which have been observed in Asia. These include heatwaves, coastal flooding, biodiversity loss, urban heat island effect, extreme rainfall events, urban drought, riverine flooding, and agriculture and food system shifts.[19] Furthermore, climate risks including glacial lake flooding, water scarcity, and intensity of cyclones are projected to increase as global warming ramps up.

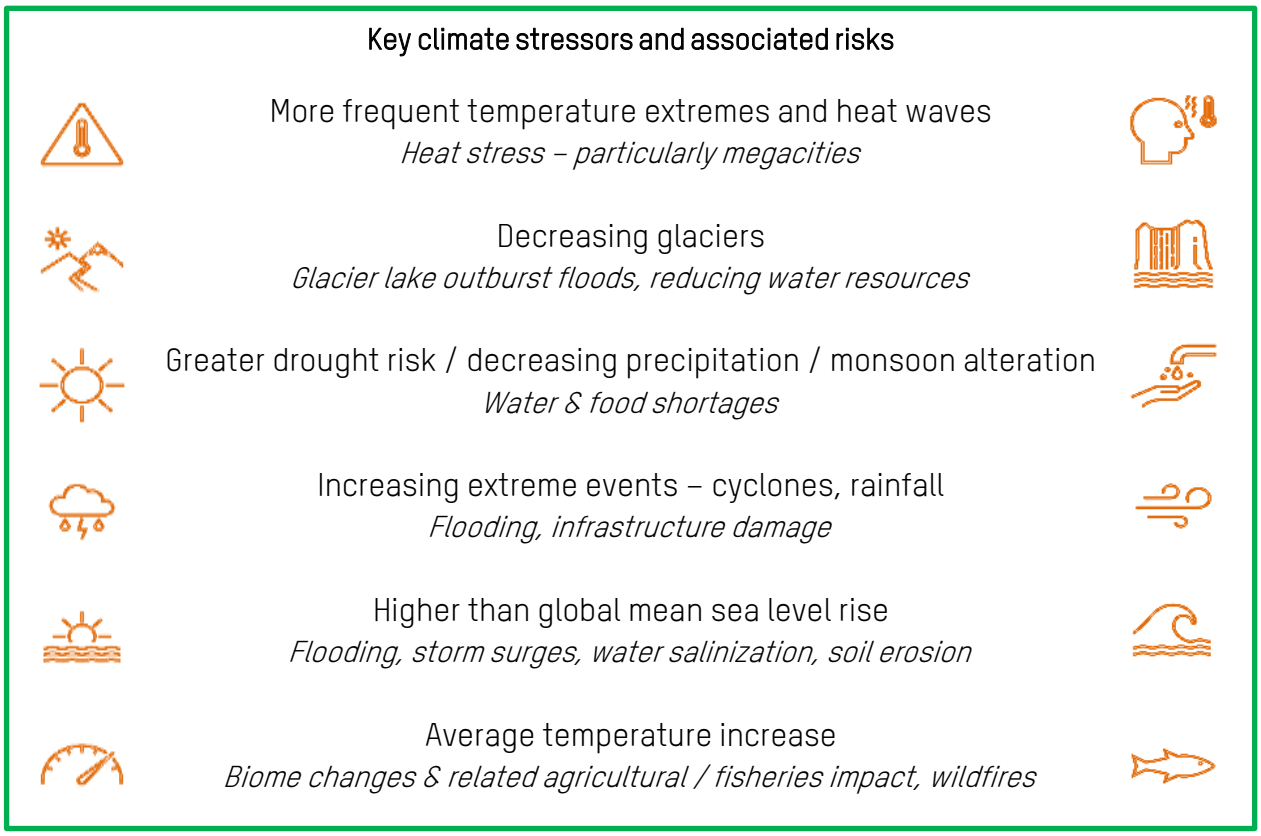

Figure 2: Key climate stressors and their associated risks.

Source: Adapted from R. Shaw et al, (2022) 'Asia', in H-O. Pörtner et al. (2022). Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.

GENDERED IMPACTS

Climate impacts affect different groups of people differently; individuals, communities, and groups facing discrimination in their access to livelihood resources and opportunities all face higher vulnerabilities to climate impacts and related losses. While the Asian countries are highly vulnerable to climate change on the national level, the impacts outlined above are felt differently on an individual level, based on intersecting factors such as gender, age, ethnicity, (dis)ability, religion, socioeconomic status, and more.

Gender-based norms, practices and policies are a major factor in governing an individual's climate vulnerability in low-income countries.[20] In many lower income countries, women are the primary providers of food, water, fuel, and care for their families due to gender roles where women carry out the majority of household duties and unpaid care work. Women do the greatest amount of subsistence farming to provide for their families and they are more often involved in the protection of natural resources.[21] This relationship with the environment, coupled with the systemic discrimination they face in accessing livelihood resources (land, production inputs, credits, etc), results in them being disproportionally affected by climate changes.

Furthermore, with unequal participation in decision-making processes and labour markets, inequalities are compounded, preventing women and other demographics from engaging in climate-related policy making, planning, and implementation, and therefore preventing them from benefitting from equal opportunities. As a result, impoverished women, girls, and boys, have some of the highest vulnerabilities to climate impacts in the world.

Furthermore, as the climate crisis worsens, communities and governments are forced to pay for the rebuilding after disasters strike, often forcing cuts to key social services such as the health, education, and welfare sectors. This results in poor and marginalized communities being pushed deeper into poverty.

1.3 CLIMATE IMPACTS – CASE STUDIES

As global warming increases, the risks to Asia progressively increase. Substantial climate related hazards have been observed in the region in the past year. Some of the major events – both fast and slow onset – are examined below.

EXTREME MONSOONAL RAINFALL & GLACIAL MELTWATER FLOODING; PAKISTAN, JUNE - SEPTEMBER 2022

Pakistan got hit with catastrophic flooding in the 2022 summer rainy season. At its peak, one third of Pakistan was physically underwater (Sands, 2022). The floods have been caused by a combination of climate stressors. Record high temperatures earlier in the year (see next section for details) brought increased glacial melt in the mountains feeding into Pakistan's river systems contributed to a high base water table. This was followed by heavy monsoon rains, with rainfall in August being 3 times the average nationally

and up to 7 and 8 times the average in the southern regions of Sindh and Balochistan respectively.[22]

This "perfect storm" of climate impacts resulted in catastrophic effects. As of 23rd Sept, 1,606 people have died directly from the flooding, 579 of which were children, with a further 12,863 injured. In all, 33 million people have been affected.[23] On August 25th, a national emergency was declared by the government.[24]

The long-standing impacts of the floods should not be underestimated, with waterborne diseases posing serious health risks. As stagnant waters encourage the spread of mosquitos, and safe drinking water difficult to come by, diseases such as diarrhoea, typhoid, and cholera are expected to become an issue, while cases of malaria and dengue fever – which Pakistan already has high numbers of – may also increase. Further health risks include the potentially stunted growth of children resulting from malnutrition and the disruption of a polio vaccine rollout programme.[25]

Damages are expected to exceed preliminary estimates of $10 bn.[26] Pakistan contributes less than 1% of global carbon emissions.

EXTREME HEATWAVES; CHINA, JULY - AUGUST 2022 / INDIA & PAKISTAN, MARCH – MAY 2022

In the summer of 2022, China experienced the strongest heatwave since the country began compiling complete meteorological record in 1961, in terms of the intensity, impacts, scale, and duration. It was widespread across central, eastern, and southern China. Close to one billion people were exposed to temperatures exceeding 35°C, and 360 million experienced temperatures of more than 40°C at some point during the heatwave.[27,28]

Along with the heatwaves, the Yangtze River basin - the country's largest river and Asia's longest watercourse - experienced the worst drought on record. The basin received up to 80% less rain than the 30-year average for that period, and temperatures were 2–4°C higher than the average.[29] To offset the effects of the drought, the Ministry of Water Resources ordered the release of 5.3 billion cubic meters of water from reservoirs into the middle and lower reaches of the Yangtze.[30] The Yangtze River Basin region is home to nearly half a billion people.

The record-breaking heatwave and drought posed adverse impacts on food production. Ministries jointly issued an emergency notice in August 2022,[31] warning the drought had posed severe threat to the autumn harvest and urged for measures to mitigate the adverse effects of the drought.[32] Since July, the drought affected 38.305 million people, damaged 4.076 million hectares areas of crops and caused a direct economic loss of 32.8 billion Chinese yuan (approx. $4.56 bn USD), according to data released in September 2022 by China's Ministry of Emergency Management.[33]

China is not alone in experiencing record breaking heatwaves, with India and Pakistan – a region of over a billion people – exposed to temperatures topping 50°C in March, April, and May of this year.[34] Temperature increases in already humid areas are of even greater concern after new research highlighted the limits to human adaptability to high temperatures are likely far lower than previously thought.[35] This means that larger proportions of the global population are, and will be, exposed to potentially deadly conditions. Throughout May 2022, regions in India saw wet bulb temperatures[36] climbing above this newly identified limit to human

survivability. Furthermore, Asia's megacities, such as New Delhi, are particularly vulnerable to heat stress due to the urban heat island effect.[37]

83,700 people are estimated to die due to hot temperatures every year in India, a figure that will only increase under long-term climate change.[38,39]

SEA LEVEL RISE & SALINIZATION, GABURA ISLAND, SATKHIRA, BANGLADESH

Gabura Island is surrounded on all sides by the Kholpetua River. The 32,000 strong population are reliant on paddy cultivation, cattle grazing, shrimp fisheries, and two drinking water ponds. The south-western region of Bangladesh – part of the Sundarbans mangrove reserve lining the Bay of Bengal – is already highly vulnerable to cyclone activity, which is only set to become more intense / frequent as global temperatures rise.[40,41]

As stated in the IPCC Assessment Report 6, Bangladesh is one of the most vulnerable countries in the world to climate change, suffering from exposure to a range of climate hazards including cyclones, droughts, flooding, and heat waves.[42]

Bangladesh is also considered the third most vulnerable country to sea level rise globally,[43] which is an impact causing deep, insidious damage. Excessive influx of saltwater coming with high tides is salinizing the land of Gabura Union. As the island suffers from saline intrusion, food and water supplies are endangered. Farmers have complained they are unable to grow crops or grass anymore, leading to reduced rice cultivation and lower carrying capacity to support cattle.[44] During storm surges, the two drinking water ponds are also contaminated, such as during cyclone Amphan.[45] Additionally, islanders hoping for alternative food sources such as shrimp have had their hopes dashed by viral attacks in the shrimp population due to heat stress.

These factors have coalesced to cause significant malnutrition issues. The lack of safe drinking water is becoming a substantial health concern. Drinking saline water can result in various complications including heart disease and diarrhea. The issue is particularly worrisome for pregnant mothers, with the intake of saltwater resulting in a number of miscarriages and pregnancy abnormalities.

The Gaburan community has tried to protect the island from the tidal surges by planting trees, but these efforts have thus far been inadequate.[46] The dwindling prospects for the people of Gabura as sea levels continue to rise have resulted in large numbers of migrants driven inland to the capital Dhaka in search of new beginnings.

The lesson from Gabura Island is that climate change is pervasive and is not limited to just "fast-onset", newsworthy shocks but also causes massive pressures through "slow-onset" events such as salinization.

1.4 COUNTRY VULNERABILITY AND PREPAREDNESS TO CLIMATE CHANGE (ND-GAIN)

Asia has a large range of climate vulnerabilities and preparedness, according to the Notre-Dame Global Adaptation Initiative Index (ND-GAIN).

ND-GAIN assesses a country's vulnerability to- and readiness for- climate change (see box 3 for further definition). The closer the score to 100, the better set that country is to handle the climatic changes headed their way.[47]

In Asia, scores range from 70.6 (Singapore), to 33.0 (Afghanistan). Globally, Afghanistan ranks 175th out of 182 countries, the lowest ranked country outside of sub-Saharan Africa.

ND-GAIN scores take into account two separate factors: vulnerability and readiness (see box 3). Therefore, a country may be in a highly vulnerable position, but be very well prepared for those risks, such as Japan, while others will experience the opposite. This relative balance can be seen in Figure 3, whereby those countries marked in red (upper left quadrant) represent those countries with high vulnerabilities and low readiness, and those marked in green (bottom right quadrant) have relatively low vulnerabilities and high readiness. 9 of the 18 countries being studied here reside in the upper left quadrant, 6 in the upper right quadrant, and 3 in the bottom right quadrant. How each of the countries rank within Asia and globally can be seen in Table **2**.

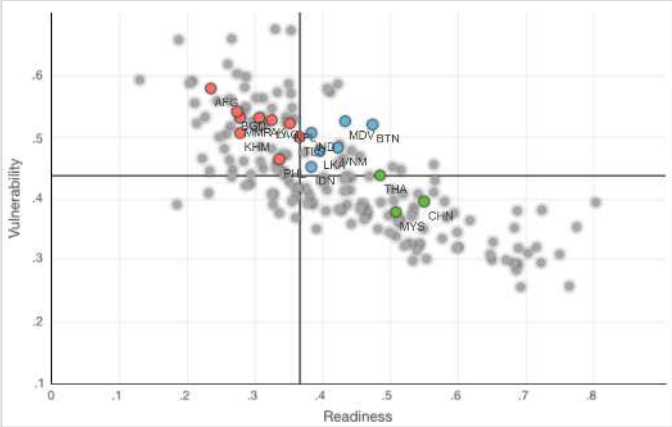

Figure 3: The ND-GAIN Matrix for Asia countries (2020).

Upper left quadrant equates to a country with high levels of vulnerability, but low levels of readiness.

Source: ND-GAIN. (2022). Notre Dame Global Adaptation Initiative Country Index. University of Notre Dame.

Country	Asia Rank (2020)	Global ND-GAIN Rank (2020) (/182)	ND-GAIN Score (2010)	ND-GAIN Score (2020)	Change in ND-GAIN (2010 to 20)	ND-GAIN Score (2010-20 Average)
Singapore	-	6	67.8	70.6	2.8	69.9
Republic of Korea	-	15	66.0	67.2	1.2	66.9
Japan	-	19	68.2	65.5	-2.7	66.8
China	1	39	57.7	57.9	0.2	55.5
Malaysia	2	49	54.0	56.6	2.6	56.2
Thailand	3	68	49.4	52.4	3.1	50.7
Bhutan	4	94	43.1	47.8	4.8	45.7
Vietnam	5	97	42.8	47.1	4.4	44.9
Indonesia	6	100	50.4	46.8	-3.6	47.6
Sri Lanka	7	104	42.4	46.0	3.6	44.5
Maldives	8	106	42.9	45.6	2.6	44.0
India	9	111	47.9	44.0	-4.0	43.8
Philippines	10	113	40.7	43.9	3.2	42.8
Timor-Leste	11	117	41.5	43.5	2.1	43.5
Nepal	12	126	38.3	41.7	3.4	40.4
Laos	13	137	36.7	40.1	3.4	38.9
Pakistan	14	146	45.1	39.0	-6.0	40.7
Cambodia	15	149	36.5	38.7	2.3	38.0
Myanmar	16	156	40.8	37.6	-3.2	37.5
Bangladesh	17	164	44.0	36.9	-7.1	39.0
Afghanistan	18	175	31.8	33.0	1.2	32.5
*Asia Average**		***114***	***43.7***	***44.4***	***0.7***	***43.7***

Table 2: The ND-GAIN scores and relative rankings for the 18 Asia countries and select regional high-income comparators in grey.

*Asia average only for the 18 recipient countries (i.e., excludes Singapore, Korea and Japan)

Source: ND-GAIN. (2022). Notre Dame Global Adaptation Initiative Country Index. University of Notre Dame.

Box 3. ND-GAIN matrix – Key definitions[48]

Vulnerability - Propensity or predisposition of human societies to be negatively impacted by climate hazards.

ND-GAIN assesses the vulnerability of a country by considering six life-supporting sectors: food, water, health, ecosystem services, human habitat, and infrastructure. Each sector is in turn represented by six indicators that represent three cross-cutting components: the **exposure** of the sector to climate-related or climate-exacerbated hazards; the **sensitivity** of that sector to the impacts of the hazard and the **adaptive capacity** of the sector to cope or adapt to these impacts.

Readiness - Readiness to make effective use of investments for adaptation actions thanks to a safe and efficient business environment.

ND-GAIN measures readiness by considering a country's ability to leverage investments to adaptation actions. ND-GAIN measures overall readiness by considering three components: **economic readiness, governance readiness** and **social readiness.**

Source: Chen, C., Noble, I., Hellmann, J., Coffee, J., Murillo, M., & Chawla, N. (2015). University of Notre Dame Global Adaptation Index (ND-GAIN) - Country Index Technical Report. 1–46.

1.5 RECIPIENT COUNTRY NEEDS

Recipient countries are in an urgent need of support and assistance to tackle the climate crisis. Firstly, the support they need to adapt to current and expected climate impacts, and secondly to help them transition to low-carbon economies. Specific "costed needs" are outlined as part of international reporting mechanisms.

COSTED NEEDS

There are nine types of recipient country reports to the UNFCCC which can contain information related to financial needs, or "costed" needs. Of these nine, three cover all thematic areas – Nationally Determined Contributions (NDCs), National Communications (NCs), and Biennial Update Reports (BURs). These reports serve different purposes under the UNFCCC system (see Table **3**).

Nationally Determined Contributions	**NDCs** are climate action plans to cut emissions and adapt to climate impacts. They are required under the Paris Agreement and are to be updated every five years.[49]
National Communications	**NCs** are reports that each party to the UNFCCC submits related to their greenhouse gas inventory, the steps they are taking to implement the objectives of the convention, and any other information found relevant by the party. NCs are submitted every four years.[50]
Biennial Update Reports	**BURs** are for non-Annex I parties to provide an update on the most recently submitted national communication as well as further information related to mitigation actions taken or to be taken, and any support received to achieve these. BURs are submitted every two years.[51]

Table 3: Description of the purpose of different UNFCCC country reporting mechanisms

The UNFCCC Standing Committee on Finance's Needs Determination Report (NDR), 2021 summarises the costed needs outlined in each recipient

country's UNFCCC reports.[52] The NDR was correct as of May 2021. Below is a table representing the costed needs from each of the above UNFCCC reports for each of the Asia countries, with updates input manually if any of these countries submitted reports after the May 2021 NDR publication.

Countries have different methodologies for outlining their costed needs, and therefore use the reports differently. For ease, the report with the largest costed adaptation, mitigation, and cross-cutting needs for each of the Asian countries is presented.

($bn)	Adaptation	Cross-cutting	Mitigation	Total to be met by 2030	Average required per year to 2030	NDC Specifying Conditional Finance?
Afghanistan	10.761	-	11.439	22.2	2.47	No
Bangladesh	44		143.73	187.73	20.86	For Mitigation only
Bhutan	0.385	-	3.45	3.835	0.43	No
Cambodia	2.085	-	5.771	7.856	0.87	No
China	3,627.57	-	4,836.76	8,464.329	940.48	No
India	-	2,500	-	2,500	277.78	No
Indonesia	-	-	322.86	322.86	35.87	No
Laos	-	-	4.76	4.76	0.53	Yes
Malaysia	0.104	-	4.876	4.98	0.55	No
Myanmar	-	-	1.21	1.21	0.13	No
Nepal	0.745	-	25	25.745	2.86	For Mitigation only
Pakistan	70-140	-	40	180	20.00	For Energy Sector
Philippines	-	-	2.96	2.96	0.33	No
Sri Lanka	0.83	-	-	0.83	0.09	No
Thailand	-	-	-	-	-	No
Timor-Leste	0.07	-	0.031	0.101	0.01	No
Vietnam	35	-	44.13	79.13	8.79	No
Total Asia	**3,861.55**	**2,500.00**	**5,446.98**	**11,808.53**	**1,312.06**	**-**

Table 4: The costed financial needs of each of the Asia recipient countries ($bn).

Source: according to the most relevant UNFCCC country report – either NDC, NC, BUR, or NAP, as taken from the UNFCCC's Needs Determination Report.

A total of $11.8 trillion in costed needs is outlined in the UNFCCC reports of the 18 Asia countries, to be met by 2030 (see Table **4**).

The countries presenting the highest costed needs in their UNFCCC reports are China ($8.5 trillion by 2030) and India ($2.5 trillion). As the economies with the largest populations, it is to be expected that these countries will have high costed needs. The next largest costed needs figures are from Indonesia ($323 bn) and Bangladesh ($188 bn). Both of these countries have higher than average vulnerability to climate change and Bangladesh in particular is a country which is also has particularly low readiness to deal with these impacts (see section 1.3 for an example). Despite this, the total mitigation finance needs far outweigh the adaptation finance needs for these countries. This is a recurring theme over the total costed needs for Asia, with the balance between mitigation ($5.4 trillion) to adaptation ($3.7 trillion) finance being 59% : 41%.

This may be a result of the difficulties countries have in calculating adaptation needs. Several of the countries wrote in their reports that calculating costed needs was challenging, and some negated to provide a figure, instead outlining qualitatively their needs. An example being Sri Lanka, which only outlined a small portion of its required adaptation finance, despite clear evidence of the need to transition and adapt in the face of climate change, as well as the expectation of heavy economic losses and damages.[53] A further example is India, who elected to only report cross-cutting needs, i.e., they did not break down how much of the finance should be directed towards mitigation actions versus adaptation actions.

Box 4: Mitigation and adaptation in Sri Lanka NDC

"While Sri Lanka presents increased mitigation ambition in this Nationally Determined Contribution, and seeks international support to realise this ambition, the country more urgently requires support for adaptation and reducing losses and damages from climate-induced disasters."

Source: pg. 57, NDC, Ministry of Environment, Sri Lanka, 2021

Furthermore, of those that did outline costed needs, many did not specify whether this finance is conditional or unconditional. As part of their NDCs, many developing countries outline their climate ambitions at two levels; firstly, that which is unconditional, i.e., that the country plans to do regardless of other circumstance, and conditional, which will only be met subject to adequate financial support from developed countries. The majority of Asian nations do not make this breakdown available in their reports.

RISK OF DEBT DISTRESS

Of relevance to a country's preparedness for climate impacts is its levels of public debt.

The governments of Asia hold varying levels of debt, from 134% of GNI (Bangladesh) to just 3% (China). Four of the Asian nations are at moderate to high risk of debt distress according to the IMF's Debt Sustainability Framework.[54]

Whether a country is in debt distress is calculated from a range of factors, including economic projections and the terms and conditions of the debt accrued. Currently, the average Asia nation has debt worth 30% of its total GNI (see Table **5)** and pays the equivalent of 14% of exports of goods, services, and primary income on debt servicing alone.

The 18 Asia countries	Risk of Debt Distress (as of 31 May 2022)	Present value of external debt (current USD Mn, 2020)	Present value of debt (% of GNI, 2020)	Debt service on external debt, total (current USD Mn - 2022)	Total debt service (% of exports of goods, services, and primary income, 2020)
Afghanistan	High	2,000	10%	135	3%
Bangladesh	Low	2,700	124%	172	7%
Bhutan	Moderate	44,000	13%	4,698	10%
Cambodia	Low	7,600	31%	1,605	7%
China	n/a	390,000	3%	192,599	9%
India	n/a	180,000	7%	56,039	15%
Indonesia	n/a	240,000	23%	53,782	37%
Laos	High	9,600	53%	2,153	16%
Malaysia	n/a	No data	No data	No data	No data
Maldives	High	2,300	67%	722	16%
Myanmar	Low	No data	No data	No data	No data
Nepal	Low	6,300	19%	435	12%
Pakistan	n/a	78,000	30%	17,102	32%
Philippines	n/a	53,000	14%	8,122	10%
Sri Lanka	n/a	37,000	47%	7,120	39%
Thailand	n/a	36,000	7%	14,721	6%
Timor-Leste	Moderate	205	9%	23	1%
Vietnam	n/a	47,000	18%	15,381	6%
Average	-	**70,982**	**30%**	**23,425**	**14%**
Total	-	**1,135,705**	-	**374,807**	-

Table 5: Debt statistics for the Asia countries in the year 2020
Sources: unless otherwise stated (World Bank, 2022b), financial figures in USD million (Mn). Risk of debt distress is taken from the most recent IMF Debt Sustainability Analysis 2022 (IMF, 2022).

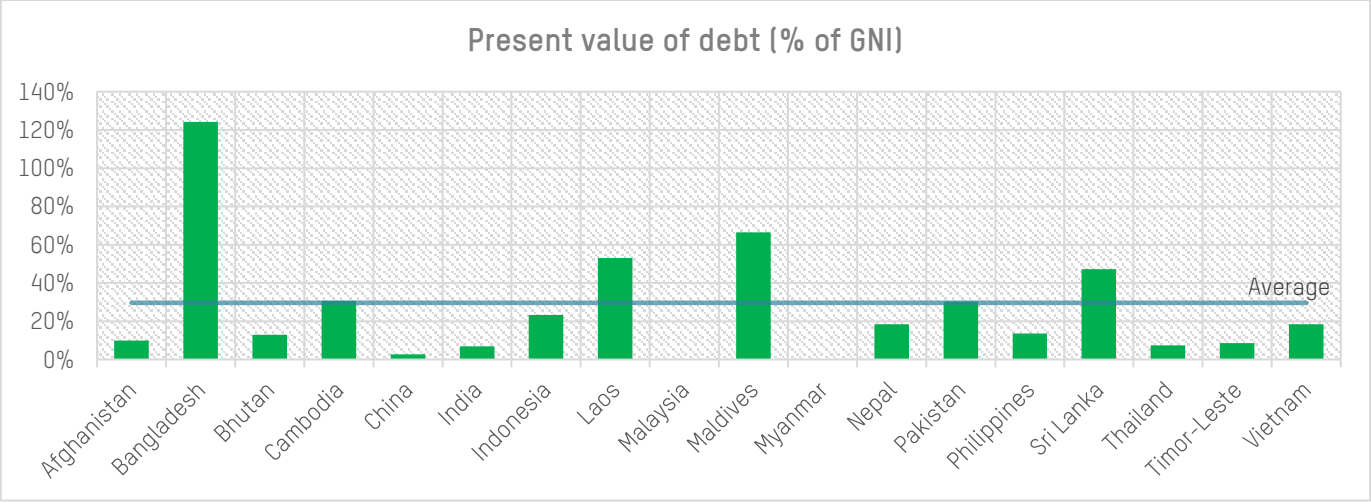

Figure 4: The value of debt of Asia nations in comparison to GNI. Figures correct for 2020.

No data for Malaysia / Myanmar
Source: World Bank (2022b).

2 QUANTITY OF CLIMATE FINANCE REACHING ASIA

The international community, in particular the most developed countries in the world, have a responsibility to help the more vulnerable countries in the world adapt to climate change and transition to the green economies needed to avoid emissions-heavy development pathways. This responsibility has precipitated in the promise of financial support and assistance in the form of climate finance.

At COP15 in Copenhagen - and later re-affirmed through the Paris Agreement, Annex II nations (the most developed in the world) pledged to provide and mobilize $100 bn worth of climate finance annually by the year 2020 and through to 2025, at which point a new pledge above the $100 bn floor is to be made.

As was made abundantly clear at COP26 in Glasgow, this promise was broken, with only $83 bn being committed in 2020.[55] Despite promises from the COP26 Presidency that the $100 bn will be achieved over a delayed deadline (2025), these broken promises highlight yet again that developed country promises are not backed up by appropriate action.

As international fora move from discussions of pledges to discussions of implementation, it is important to consider the progress made so far, and how this plays out on the regional level. Following Oxfam's first regional assessment of Climate Finance in West and Central Africa / Sahel,[56] this study assesses climate finance flows to Asia. In this section, we look in detail at how climate finance is dispersed across neighbouring countries, the quantity of that finance, the quality of that finance, and make pertinent recommendations as to how climate finance should be scaled-up to achieve what is needed.

Annex II parties report their climate finance provisions within their Biennial Reports (BRs), however the submissions of the fifth round of biennial reports, relevant for reporting years 2019-2020, have been delayed one year.[57] Therefore, this study utilises OECD-DAC data in its place to analyse climate finance flows. More information can be found in the methodological Annex.

2.1 TOTAL CLIMATE FINANCE

Over the 8-year period spanning 2013-2020, $113 billion in climate finance has been committed to Asian recipient countries, equating to an average of just over $14 bn per year. This finance is delivered through both bilateral and multilateral channels and is directly relevant to the global $100 bn goal.

On a time-series basis, the trend in annual climate finance has risen from approximately $12 in 2013 to $20.5 bn by 2020 (see Figure 5). A particular 'uptick' can be seen in the final year of the period in question - rising from $16 bn in 2019. Overall, climate finance has seen an average increase of 8.6% per year.

However, when we consider that much of this finance does not come in the form of grants, the actual financial burden placed on providers to deliver this finance is much lower. The increasing global trend in use of non-grant

financial instruments[58] has been made clear through Oxfam's various Climate Finance Shadow Reports.[59,60,61] This trend is no different in Asia.

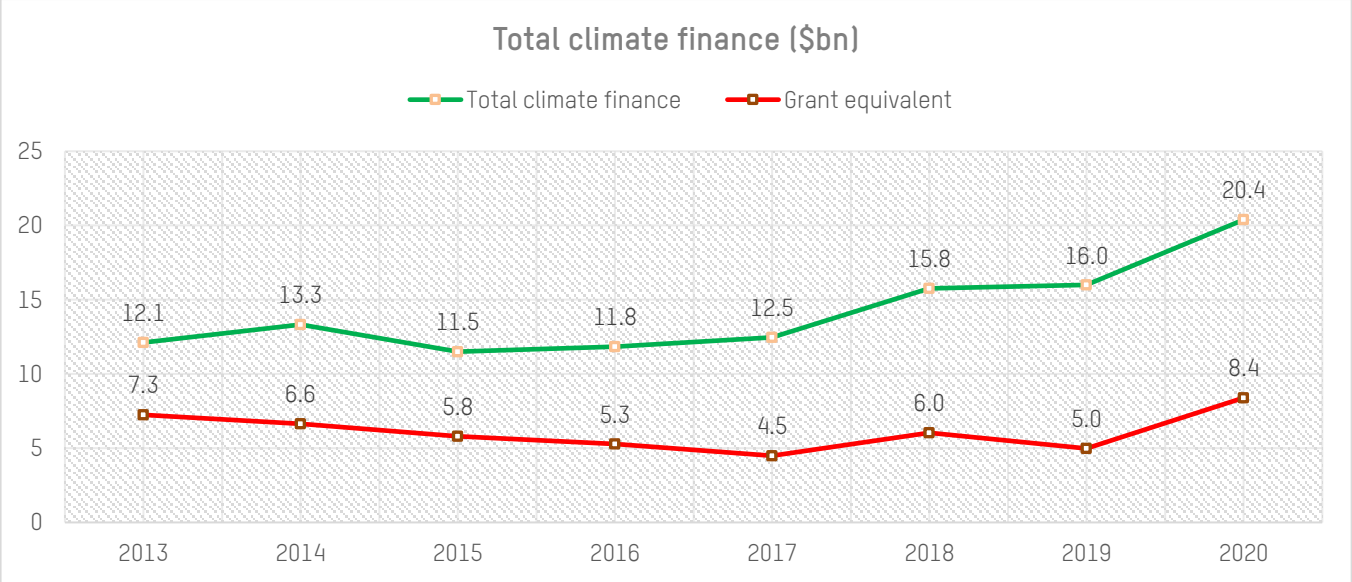

Figure 5: Total climate finance provided to Asian recipient countries, and the grant equivalent of that finance over a 2013-2020 time series ($bn).

Source: Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

If we take into account non-grant instruments, i.e., finance which needs at least in some part to be paid back to the lender, we come to a grant-equivalent measure of total climate finance provided. For Asia, the grant equivalent total over the entire period is just $49 bn, 43% of the initially calculated $113 bn (see Figure 5). This equates to $6.1 bn per year.

Furthermore, the grant equivalent amount has not progressed at the same rate as the "face value" climate finance as reported by providers over the period. In contrast to the 8.6% increase in the total, the grant equivalent has increased by an annual average of only 5.8%. In 2013, $7.3 bn was provided in grant equivalent finance (60% of the $12.1 bn total), compared to $8.4 bn in 2020 (41% of the $20.4 bn total). In the years between, the grant equivalent amount dropped to a notable low of just $4.5 bn (36% of the $12.5 bn total) in 2017, while the year 2019 had seen the lowest proportion of grant equivalent finance compared to the total of just $5.0 bn (31% of the $16.0 bn total) (see Table **6**).

This clearly shows the level of concessionality in finance to Asia has trended downwards overall (i.e., more loans, fewer grants). While this has been masked by the up-tick in 2020 in total and the grant-equivalent amounts, the trend for increasing use of non-grant financial instruments remains apparent.

Year	Total Climate Finance (USD Bn)	Total Grant Equivalent (USD Bn)	Grant Equivalent %
2013	12.1	7.3	60%
2014	13.3	6.6	50%
2015	11.5	5.8	51%
2016	11.8	5.3	45%
2017	12.5	4.5	36%
2018	15.8	6.0	38%
2019	16.0	5.0	31%
2020	20.4	8.4	41%
Grand Total	**113.4**	**48.9**	**43%**

Table 6: The estimated total climate finance received by Asian countries in the period 2013-2020, and the estimate of the Grant Equivalence of this finance. All figures USD bn.

Source: Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

2.2 CLIMATE FINANCE PROVIDERS

TYPES OF PROVIDER – CUMULATIVE TOTALS

The $100 bn climate finance goal can be provided and mobilised from a variety of sources and delivery channels.[62] Here, we break down the proportions of climate finance coming directly from public bilateral and multilateral sources.

Of the $113 bn climate finance provided, $53 bn was provided by bilateral sources (i.e., by DAC member states), compared to $60 bn from multilaterals. To break this down further, of the $60 bn of multilateral financing, $55bn came from Multilateral Development Banks (MDBs), compared to $5 bn from Other Multilateral Institutions, such as the Green Climate Fund (GCF).

As was outlined in the previous section, the level of concessionality of climate finance from these provider types can be inferred through the grant equivalence measure. Bilateral sources from DAC member states and Other Multilaterals have far higher grant equivalence proportions, 64% and 65% respectively, than MDBs – who's total grant equivalent climate finance amounted to just 20% of their own reported face-value totals (see Figure 6). This shows that MDB finance favours non-grant instruments far more than Bilateral or Other Multilateral sources.

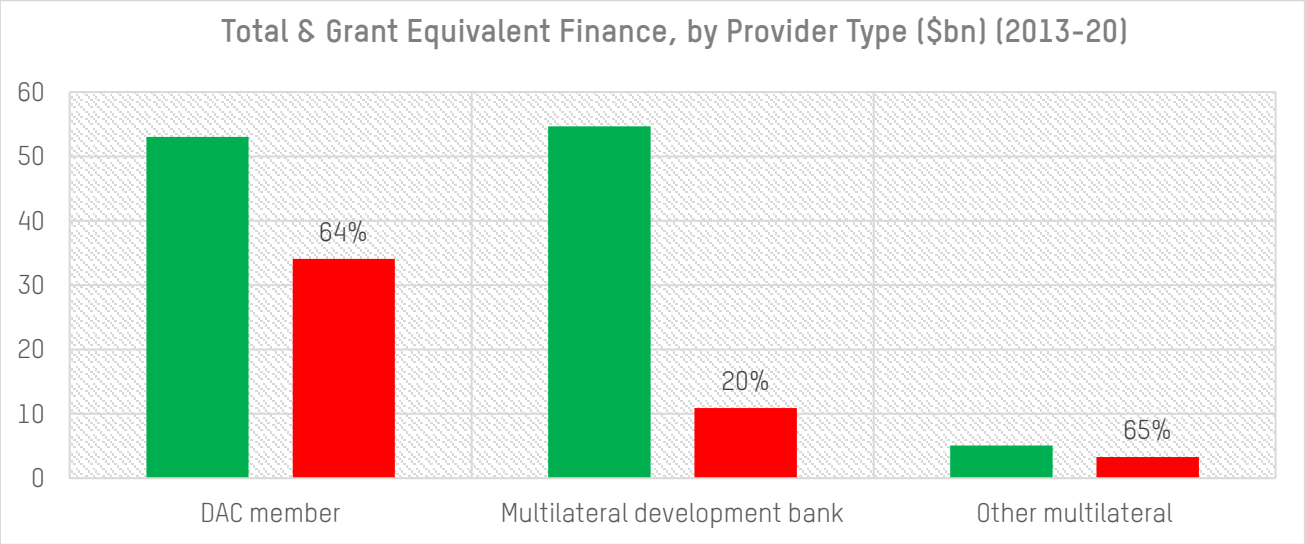

Figure 6: The amount of total finance to the Asia region between the years 2013-2020. Figures are presented in both the reported totals (with a coefficient of 40% applied to Rio Marker 1 projects), and their estimated grant equivalent totals (in red).

TYPES OF PROVIDER – TIME-SERIES ANALYSIS

The balance between these different sources has also changed over the period, as can be seen in Figure 7 and Table **7**. When looking at the shares of bilateral against multilateral finance over the time series, it can be observed that the proportion of finance from multilateral finance (both MDBs and other) has been increasing relative to bilateral finance in the final years (2017, 18, 19, & 20) (see Figure 7a). However, the final year saw a large jump in amount of bilateral finance provided to Asia from bilateral sources, hence a peak in the proportion of bilateral finance can be observed. Bilateral sources made up 48% of the finance provided in 2020 compared to just 35% in 2019 and 40% the year before. In the first half of the 8-year period studied, Bilateral finance was the dominant source, providing 61% of all finance in 2013, before dropping down to just 51% in 2016. Since that moment multilateral finance has remained the majority provider type for North-South flows.[63]

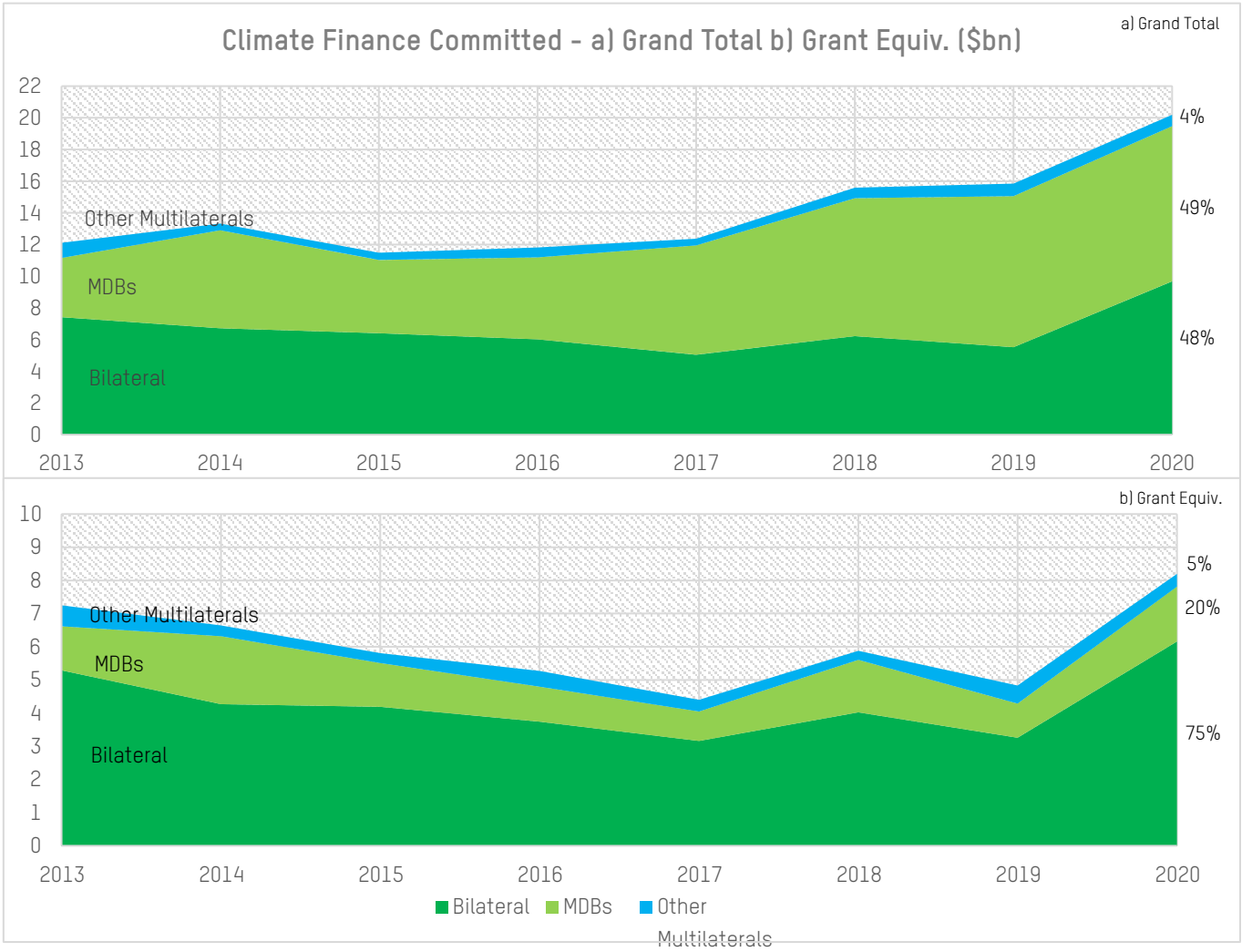

Figure 7: Total Climate Finance committed by different provider types over the time-series 2013-2020 in USD bn at the a) grand total and b) grant equivalent measure.

Relative proportions of finance provided per provider type given for the year 2020 on the right-hand side of the stacked area graphs.

Source: Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

Finance from MDBs has increased substantially from 2017 onwards, such that in the years 2017, 18, & 19 it made up over half the climate finance to the region, before reducing to 49% of the total in 2020 due to the increase in bilateral finance. Cumulatively, MDBs have been the largest player over the 8-year period, providing 53% of the finance. When only considering the second half of this study (years 2017-20), this proportion rises slightly to 55%.

In contrast, Other Multilateral finance has been largely stagnant. A high of $1 bn was provided in 2013 (8% of the total that year), and since then the $1bn mark has not been met again. Lows of $0.4 bn were provided in the years of 2014 and 2017, before rising to $0.8 (5% of total) and $0.7 bn (4% of total) in 2019 and 2020 respectively.

Considering the same time-series through a grant-equivalence lens provides a very different picture. While previously MDBs appear to be the dominant provider of finance, this shifts heavily in favour of Bilateral funders. 71% of all North-South flows of climate finance at the grant equivalence measure is provided by Bilateral funders, compared to just 23% by MDBs and 7% by Other Multilaterals.[64] As can be seen in Figure 7 b), Bilateral funding has been the dominant source throughout the study period, ranging between a low of 64% of the grant equivalent total in 2014 and a high of 75% in 2020.

	USD bn	2013	2014	2015	2016	2017	2018	2019	2020
Bilateral (DAC members)	Total Climate Finance	7.4	6.7	6.4	6.0	5.1	6.2	5.5	9.7
	% of grand total	61%	50%	56%	51%	41%	40%	35%	48%
	Grant equiv.	5.3	4.3	4.2	3.7	3.2	4.0	3.3	6.2
	% of grant equiv. total	73%	64%	72%	71%	72%	69%	67%	75%
MDBs	Total Climate Finance	3.7	6.2	4.6	5.2	6.9	8.7	9.5	9.8
	% of grand total	31%	46%	40%	44%	56%	56%	60%	49%
	Grant equiv.	1.3	2.0	1.3	1.1	0.9	1.6	1.0	1.7
	% of grant equiv. total	18%	31%	23%	20%	20%	27%	21%	20%
Other Multilaterals	Total Climate Finance	1.0	0.4	0.5	0.6	0.4	0.7	0.8	0.7
	% of grand total	8%	3%	4%	5%	3%	4%	5%	4%
	Grant equiv.	0.6	0.3	0.3	0.5	0.4	0.3	0.5	0.4
	% of grant equiv. total	9%	5%	5%	9%	8%	5%	11%	5%
Grand total		12.1	13.3	11.5	11.8	12.4	15.6	15.8	20.2
Grant equiv. total		7.3	6.6	5.8	5.3	4.4	5.9	4.8	8.2

Table 7: Detailed breakdown of sources of North-South flows of climate finance, and the grant equivalent estimate of these flows.

Source: Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

MDBs on the other hand assume much less burden for the finance they provide, dropping to a range between 18% and 31% of the annual totals. Other Multilaterals perform somewhat better, rising to a peak of 11% provision of the annual total in 2019 before falling back to a low of 5% in 2020.

LARGEST CLIMATE FINANCE PROVIDERS

LARGEST BILATERAL PROVIDERS

The largest bilateral provider to the region is Japan. This is unsurprising due to the proximity of the Annex II nation in comparison to many other major developed countries. Japan reported that it provided $28.2 bn in climate finance to its neighbours in Asia in the period 2013-2020. In the most recent year of available data, 2020, Japan provided $6 bn, some 62% of all bilateral climate finance to the region. However, taking into account that Japan uses debt instruments in its provision, we can estimate the grant equivalent of the finance they provide, which totals $19.7 bn over the whole period (70% of the total).

In the same period Germany provided $11.2 bn, France $6 bn, and the US $1.1 bn. Analysis these providers through the grant equivalence metric shows that in particular Germany and France take on far lower burdens than their totals might suggest, with the estimates being that their grant equivalents make up just 41% and 44% of their respective totals. These are the two lowest grant equivalent proportions of any bilateral providers assessed.

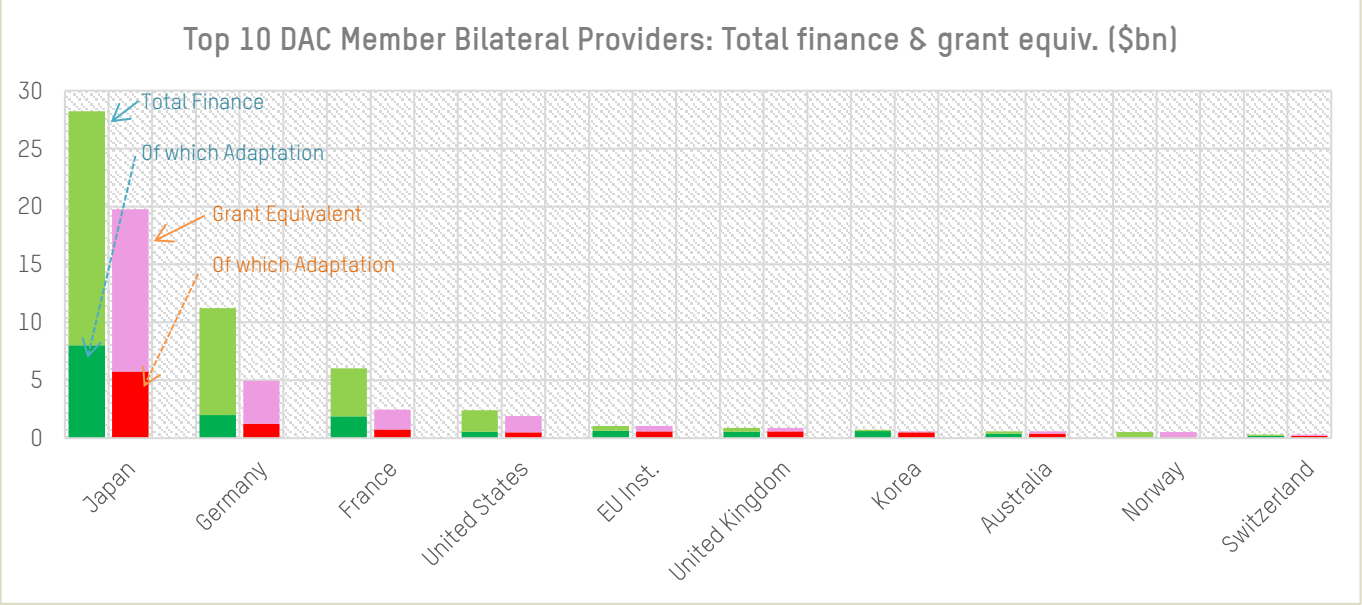

Figure 8: The top 10 largest DAC Member Parties providing bilateral finance to the Asia region between the years 2013-2020.

Figures are presented in both the reported totals (with a coefficient of 40% applied to Rio Marker 1 projects), and their estimated grant equivalent totals. Breakdown of mitigation vs adaptation provided – darker shade is adaptation finance + 50% of the cross-cutting finance provided.
Source: Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

LARGEST MULTILATERAL DEVELOPMENT BANKS

The World Bank (WB), here constituting both the International Development Association (IDA) and International Bank for Reconstruction and Development (IBRD), is by far the largest single provider of climate finance recorded, committing over $30 bn in the eight-year period from 2013-2020. Independently, the International Bank for Reconstruction and Development

contributed $15.1 bn, and the International Development Association $15.0 bn. The IBRD, the non-concessional lending arm of the WB is considered to have 0% grant equivalence as it provides no concessional financing. In contrast, IDA, the concessional lending arm of the WB has a grant equivalence rate of 51% ($7.6 bn).

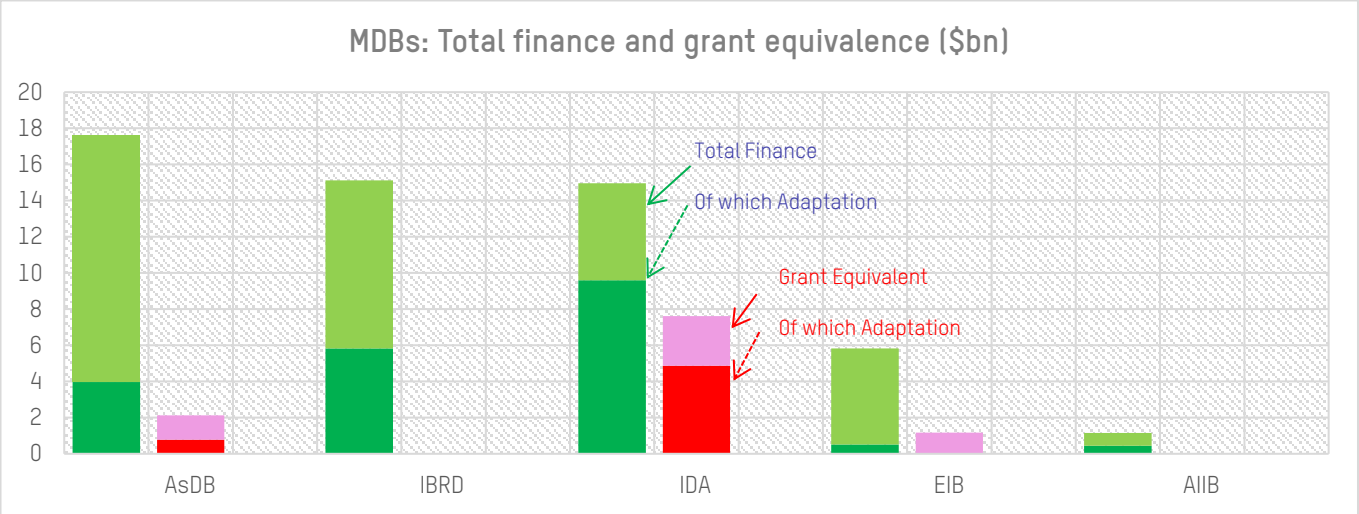

Figure 9: The 5 MDBs providing multilateral finance to the Asia region between the years 2013-2020.

Figures are presented in both the reported totals, and their estimated grant equivalent totals. Breakdown of mitigation vs adaptation provided – darker shade is adaptation finance + 50% of the cross-cutting finance provided.

Source: Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

When IDA & IBRD are considered separately, the Asian Development Bank becomes the largest individual multilateral provider to the region, committing $17.6 bn between 2013-20. Of that finance, just 12%, or $2.1 bn, is estimated to be grant equivalent. Similarly, the EIB (20%) and AIIB (0%) have very low levels of grant equivalent financing to the region.

Box 5: The Regional Development Banks – AsDB & AIIB

Asian Development Bank (AsDB)

The Asian Development Bank is the largest single multilateral provider of climate finance to Asia, committing $24.6 bn between 2013-2020, or an annual average of $3.1 bn. The share of this that can be traced back to developed country contributions is $17.6 bn (72%), or $2.2 bn annually.

The AsDB uses a range of financial instruments including concessional and non-concessional lending, grants, and equity in its climate financing. Non-concessional debt instruments dominate the portfolio, constituting 82% ($20.3 bn). Concessional debt instruments make up just 12% in contrast ($2.9 bn). 3% of the AsDB's climate finance portfolio is delivered in grant form ($0.7 bn). The remaining 3% is delivered through non-concessional equity investments ($0.8 bn).

As a result of the high level of non-concessional debt instrument use in the AsDB climate finance portfolio, the estimate of the grant equivalence of the money attributable to developed country sources is just $2.1 bn.

77% of AsDB climate finance is directed towards mitigation objectives, compared to 23% for adaptation. The largest sectors supported are Energy (42%), Transport & Storage (33%), and Water Supply & Sanitation (11%).

Asian Infrastructure Investment Bank (AIIB)

The Asian Infrastructure Investment Bank committed $4.1 bn to the region, $1.1 bn of which is attributable to developed country sources. The AIIB was initially proposed in 2013 and began its climate finance lending to the region in 2016. The AIIB only provides non-concessional climate lending and as such has a grant estimate of zero.

The AIIB provides 61% of its climate finance to mitigation objectives, compared to 39% for adaptation. The largest sectors supported are Transport & Storage (50%), Energy (31%), Water Supply & Sanitation and Agriculture, Forestry, Fishing (both 6%).

Oxfam has recently analysed the World Bank's climate finance reporting and found a lack of transparency in reporting methodology to the point where it is impossible to publicly verify or audit or replicate the Bank's numbers.[65] Oxfam has found that the Bank's reporting could be off by as much as $7 bn (or 40%) globally. This is a critical issue to the scarcity of climate finance, particularly by the grant equivalent metric. Other Multilateral Development Banks use a similar methodology to the World Bank – the Joint Principles for Climate Finance reporting. Therefore, accurate and transparent reporting and disclosure from all MDBs is vital in order to assess global efforts towards delivering climate justice for the most vulnerable communities in the world.

OTHER MULTILATERAL INSTITUTIONS

The term "Other" multilateral institution is used here to refer to all multilateral providers not considered MDBs. This includes the dedicated climate funds, such as the Green Climate Fund (GCF). The overall proportion of public climate finance channelled through these institutions is far lower than through MDBs or directly through bilateral programmes. The largest provider of these institutions is the Climate Investment Fund, committing $1.9 bn over eight years. In close second is the GCF, committing $1.7 bn over the same period, followed by the GEF with $1.2 bn.

While these totals are far lower than those shown for the MDBs, these institutions tend to have far higher grant equivalence ratios – 65% on average compared to 20%. However, a notable divergence from this trend is seen in the GCF, that only provides 40% in grant equivalent ($0.7 bn). This anomaly was also seen in Oxfam's study of climate finance flowing to West and Central Africa / Sahel, with the GCF providing just 27% of its total finance in grant equivalent terms.[66]

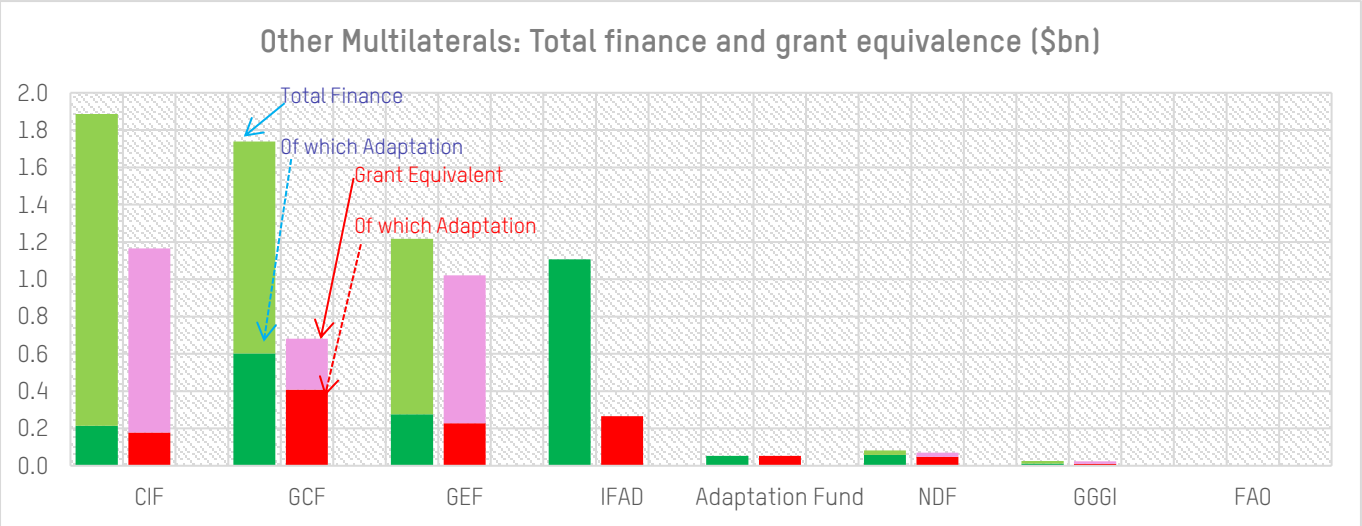

Figure 10: The 8 Other Multilateral Institutions providing finance to the Asia region between the years 2013-2020.

Figures are presented in both the reported totals, and their estimated grant equivalent totals. Breakdown of mitigation vs adaptation provided – darker shade is adaptation finance + 50% of the cross-cutting finance provided.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

2.3 RECIPIENT COUNTRIES

The distribution of climate finance across the region in absolute finance received can be seen in

Figure **11**. India received by far the highest total amount of climate finance of any country between 2013-20 ($37.1 bn), followed by Bangladesh ($14 bn), China ($12.1 bn), Indonesia ($10.0 bn), Philippines ($7.8 bn), and Pakistan ($7.7 bn). The largest providers of finance to these countries are shown in Table **8**.

Recipient Country	1st Largest Provider ($bn)	2nd Largest Provider ($bn)	3rd Largest Provider ($bn)
India	Japan ($11.4 bn)	Germany ($6.1 bn)	IBRD ($5.5 bn)
Bangladesh	IDA ($4.8 bn)	Japan ($4.7 bn)	AsDB ($2.1 bn)
China	IBRD ($4.3 bn)	AsDB ($3.8 bn)	EIB ($1.3 bn)
Indonesia	Japan ($2.2 bn)	Germany ($1.4 bn)	IBRD ($1.4 bn)
Philippines	Japan ($3.9 bn)	IBRD ($1.6 bn)	AsDB ($1.2 bn)
Pakistan	IDA ($2.9 bn)	IBRD ($1.7 bn)	AsDB ($1.0 bn)

Table 8: The three largest providers of climate finance (both bilateral and multilateral) to the six largest Asian recipient countries.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

When population size is taken into account, many of the smaller countries in the region receive proportionally higher levels of climate finance. For example, the Maldives receives $59 dollars for every person, compared to India receiving $3 per person.

The grant equivalent measure for many of these recipient countries indicates the proportion of concessional financing being received. China has the lowest grant equivalent proportion (12%) of the finance it receives, indicating it takes on far higher proportions of debt instruments than other nations. In contrast, Afghanistan has a 100% grant equivalent proportion of the finance it receives, indicating it takes on no debt to fund climate programming.

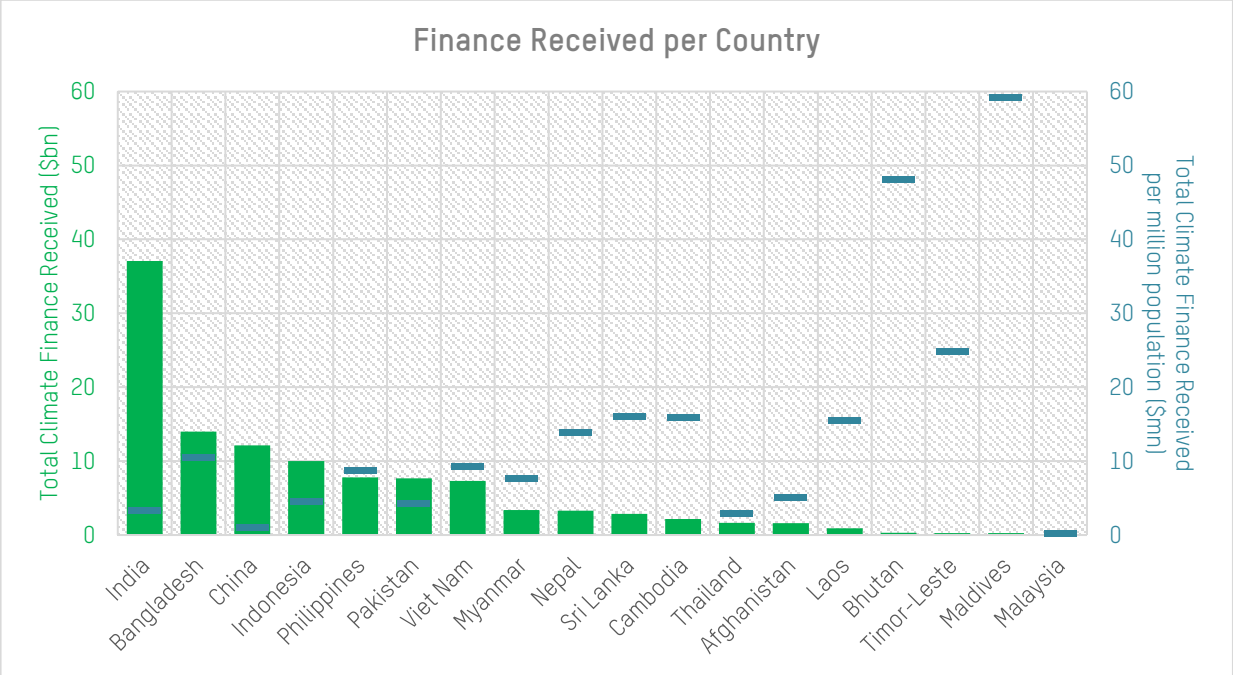

Figure 11: Total Climate Finance received per country (in USD billions - brown) and per million population of each country (secondary axis) (in USD millions - blue).

Source: Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

2013-20 $bn	**Total climate finance**	**Grant Equiv.**	**Grant Equiv.** (% of total)	**Mitigation** (+ 50% cross-cutting)	**Mitigation** (+ 50% cross-cutting) – **Grant Equiv.**	**Adaptation** (+ 50% cross-cutting)	**Adaptation** (+ 50% cross-cutting) – **Grant Equiv.**
India	37.1	13.7	37%	29.1	11.0	8.0	2.7
Bangladesh	14.0	7.3	52%	8.7	4.3	5.3	3.0
China	12.1	1.4	12%	9.1	1.1	3.0	0.3
Indonesia	10.0	4.7	47%	7.4	3.6	2.6	1.2
Philippines	7.8	3.5	45%	4.2	1.9	3.6	1.6
Pakistan	7.7	2.9	38%	5.0	1.5	2.6	1.4
Vietnam	7.3	4.0	54%	3.6	1.9	3.7	2.1
Myanmar	3.4	2.3	69%	1.7	1.1	1.7	1.2
Nepal	3.3	2.0	61%	1.5	0.9	1.8	1.1
Sri Lanka	2.8	1.1	40%	1.2	0.5	1.7	0.7
Cambodia	2.2	1.4	63%	0.5	0.3	1.7	1.0
Thailand	1.7	0.9	51%	1.6	0.8	0.0	0.0
Afghanistan	1.6	1.6	100%	0.9	0.9	0.7	0.7
Laos	0.9	0.7	75%	0.3	0.2	0.6	0.4
Bhutan	0.3	0.2	73%	0.2	0.1	0.1	0.1
Timor-Leste	0.3	0.2	91%	0.1	0.1	0.2	0.2

Maldives	0.3	0.2	80%	0.2	0.1	0.1	0.1
Malaysia	0.1	0.1	100%	0.0	0.0	0.0	0.0
Far East Asia, regional	0.4	0.3	96%	0.0	0.0	0.1	0.1
South Asia, regional	0.2	0.2	96%	0.1	0.1	0.1	0.1
South & Central Asia, regional	0.1	0.1	100%	0.2	0.2	0.1	0.1
Grand Total	**113.4**	**48.9**	**43%**	**75.7**	**30.8**	**37.7**	**18.1**

Table 9: The amount of climate finance to the Asia region per country between the years 2013-2020 according to OECD DAC data.

Figures are presented in both the reported totals (with a coefficient of 40% applied to Rio Marker 1 projects), and their estimated grant equivalent totals. A breakdown of mitigation vs adaptation (including 50% cross-cutting) finance is provided, including the grant equivalent.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

3 QUALITY OF CLIMATE FINANCE FLOWING TO ASIA: OXFAM'S ANALYSIS (NORTH-SOUTH FLOWS)

3.1 IS FINANCE TARGETING THE RIGHT OBJECTIVES?

It is estimated that of all climate finance committed to Asia between 2013-20, one third targets adaptation financing, with the remaining two thirds contributing to mitigation objectives. When we consider this ratio over the time-series, progress towards balancing the two objectives is being made, with 43% of climate finance in 2020 targeting adaptation (see Figure 12).

With adaptation being so vital to help vulnerable communities prepare for the climate risks they face; it would be

Box 6. Article 9.4, the Paris Agreement

"The provision of scaled-up financial resources should aim to achieve a balance between adaptation and mitigation, taking into account country-driven strategies, and the priorities and needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change and have significant capacity constraints, such as the least developed countries and small island developing States, considering the need for public and grant-based resources for adaptation."

Source: Paris Agreement, (2015), UNFCCC.

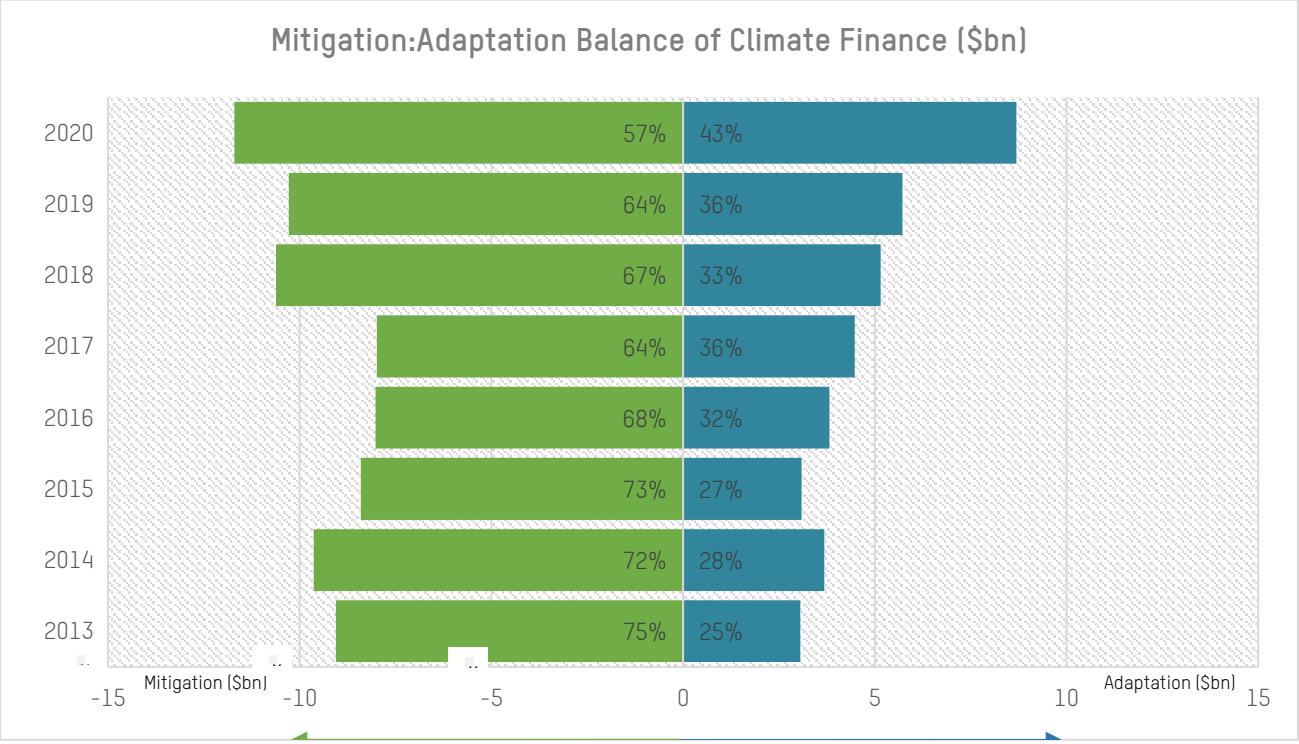

Figure 12: The balance of total adaptation and mitigation finance received by Asian countries between the period 2013-2020.

Mitigation figures shown in green with Adaptation in blue. Both adaptation and mitigation figures include 50% of cross-cutting finance. Figures in USD billion.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

expected that adaptation financing should be targeted at the most vulnerable (see box 6).

Therefore, it is encouraging to note that relatively more adaptation finance finds its way to LDCs (47%), compared to LMICs (30%) and UMICs (22%). As mitigation projects tend to have a better business case in traditional terms than adaptation, there is greater scope for sustainable debt financing to play its part. In contrast, adaptation finance needs to rely on grant funding.[67]

Year	Total Climate Finance ($bn)	Total Grant Equiv. ($bn)	Grant Equiv. (% of total)	Total Adaptation Finance (+50% cross-cutting) ($bn)	Grant Equivalent Adaptation Finance (+ 50% cross-cutting) ($bn)	Total Mitigation Finance (+50% cross-cutting) ($bn)	Grant Equivalent Mitigation Finance (+ 50% cross-cutting) ($bn)
2013	12.1	7.3	60%	3.1	1.7	9.1	5.5
2014	13.3	6.6	50%	3.7	2.2	9.6	4.4
2015	11.5	5.8	51%	3.1	1.8	8.4	4.0
2016	11.8	5.3	45%	3.8	2.0	8.0	3.3
2017	12.5	4.5	36%	4.5	2.1	8.0	2.4
2018	15.8	6.0	38%	5.1	2.0	10.6	4.1
2019	16.0	5.0	31%	5.7	2.2	10.3	2.8
2020	20.4	8.4	41%	8.7	4.1	11.7	4.3
Grand Total	**113.4**	**48.9**	**43%**	**37.7**	**18.1**	**75.7**	**30.8**

Table 10: The estimated total climate finance received by Asian countries in the period 2013-2020, and the estimate of the Grant Equivalence of this finance, broken down by adaptation and mitigation objectives.

All figures USD billion.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

Adaptation finance received vs ND-GAIN score

A further method to analyse whether adaptation finance is meeting the needs of the nations of South & South-East Asia to plot the adaptation finance received per million population against ND-GAIN scores (see Figure 13). In theory, if provider nations aligned their finance provisions to article 9.4 of the Paris Agreement through a distributive justice lens, the allocation of adaptation finance would be a function of the vulnerability and needs of the recipient nation.[68] Using ND-GAIN score as a proxy for this, one would expect to see an inverse relationship between finance received and ND-GAIN score.

The results show that there is some correlation between the amount of adaptation finance received and the climate vulnerability and readiness of these eighteen nations. As can be seen in the figure, Least Developed Countries (LDCs), such as Cambodia, tend to receive more adaptation finance per person than Upper-Middle Income Countries (UMICs), such as Malaysia.

If very small population countries are removed – which receive relatively high proportions of finance per person, i.e., Bhutan (BTN), Timor-Leste (TLS), and Maldives (MDV), the correlation is stronger. Two of these smaller countries are also Small Island Developing States (SIDS) and would therefore be expected to receive relatively high adaptation finance due to the existential threats they face.[69]

In the case of e.g., Afghanistan (AFG) the adaptation finance they receive diverges greatly from their need according to their ND-GAIN score. This is particularly pertinent as Afghanistan has the highest vulnerability and lowest preparedness score of any country outside of sub-Saharan Africa. Several other countries diver from what might be expected, including Myanmar, Bangladesh, and Pakistan, all of whom are in the lowest ranked ND-GAIN scores for Asia.

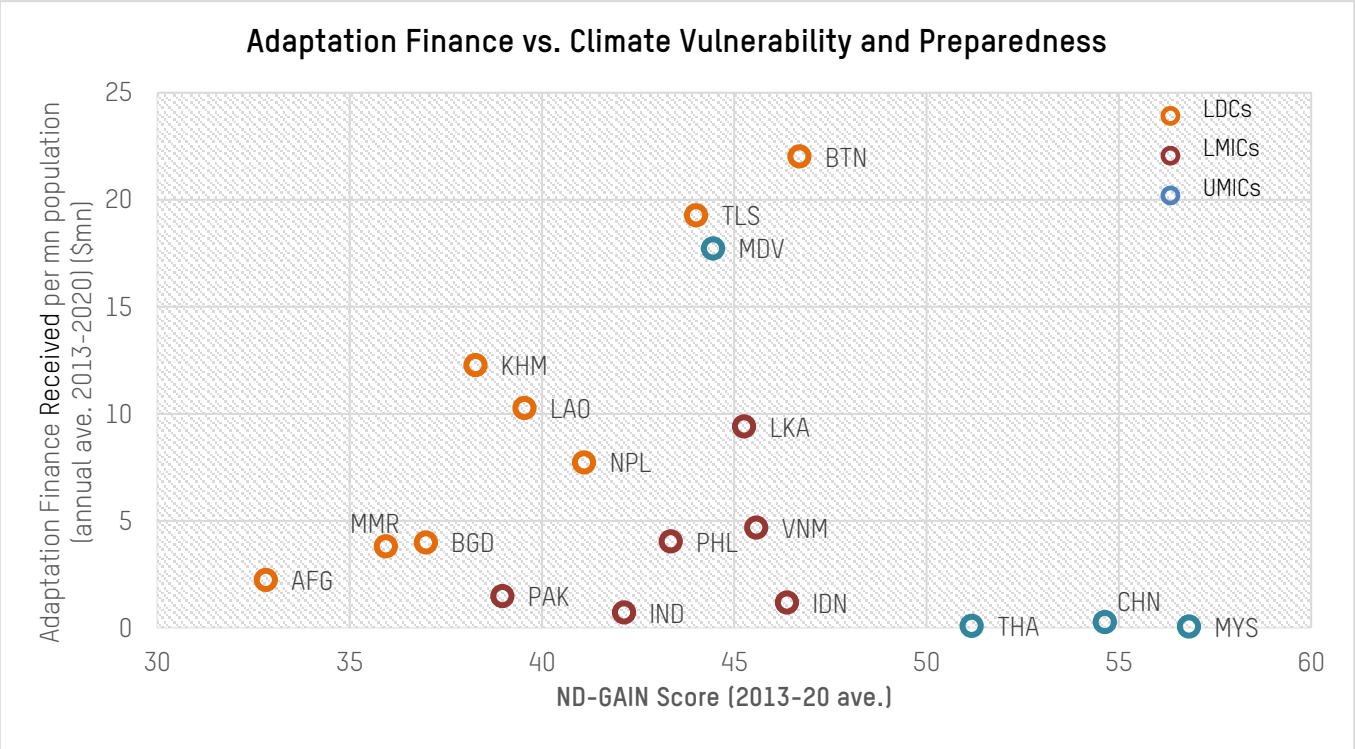

Figure 13: A scatter graph of adaptation finance received (including 50% of cross-cutting finance) per million population each year by WCAS countries against their average ND-GAIN score over the period 2013-19. Note: TLS (Timor-Leste) & MDV (Maldives) are SIDS (Small Island Developing States).

Data sources: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective & ND-GAIN indices.

While this figure presents a useful comparative analysis, it does not represent the amount of adaptation finance these countries should be receiving according to their various needs (i.e., even though Bhutan is receiving the most amount of adaptation finance per person compared to other Asian nations, this should not be taken as an indication that they are receiving adequate flows of adaptation finance).

COAL RELATED FINANCE

Overseas development finance continues to fund various fossil fuel-based projects. Furthermore, some donors elect to report these projects as climate mitigation finance, often on the grounds of enhanced efficiency, for example through so-called "clean" coal. Between 2013-2020, nearly $3 bn worth of coal related projects were reported by donors as climate-related development finance.

This reporting practice is done by three providers for the Asia region, namely Japan ($2.78 bn), the Asian Development Bank ($0.2 bn), and the United States (< $0.001 bn). The climate relevance of these projects tends to be marked as "significant", rather than "principal".

The energy needs of countries in development are sizeable and a country's right to develop should be taken into account. Many of the Asian countries are reliant on coal power, such as India which has approximately half of all its installed capacity in the form of coal power.[70] However, there is clear evidence that the practice of burning fossil fuels must decline rapidly before 2030 in order to achieve warming of less than 1.5°C (Masson-Delmotte et al., 2018). Any funding which supports the building of new fossil fuel infrastructure cannot and should not be considered climate relevant.[71] Therefore, projects such as the Matarbari Ultra Super Critical Coal-Fired Power Plant (see Table **11**) should not be marked as climate relevant.

Provider	Recipient	Project Title	Phase (Year)	Climate-related development finance ($mn)	Climate Objective (Rio Marker)	Financial Instrument	Description
Japan	Bangladesh	Matarbari Ultra Super Critical Coal-Fired Power Plant	V (2019)	1,313	Significant	Concessional Debt Instrument	To meet the increasing electricity demand and achieve stable power supply in Bangladesh by constructing an ultra-super critical coal-fired power plant in Matarbari area
			IV (2018)	609			
			III (2017)	96			To meet the electricity demand
			II (2016)	348			Stable Power Supply
			I (2014)	392	Principal		
			Total	***2,757***			

Table 11: The Matarbari Ultra Super Critical Coal-Fired Power Plant series of projects, as reported by Japan to the OECD-DAC as climate-relevant finance.

Figures in USD millions. The plant is expected to account for 10% of the total generation capacity of Bangladesh.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

3.2 FINANCIAL INSTRUMENTS & GRANT EQUIVALENCE

Bilateral providers of climate finance report their climate-relevant loans and other debt financial instruments at their face value in reporting to the UNFCCC. This face value reporting is another large component of over-estimations of climate finance. In the Oxfam Climate Finance Shadow Report, it was estimated that the grant-equivalent value of bilateral climate-related loans and other debt instruments could be $12.7 bn lower than reported figures.[72]

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It is estimated that if all countries providing bilateral finance to the Asia region reported grant equivalent figures instead of face value figures:

- annual averages of bilateral climate finance would be reduced by $2.37 bn (36% reduction)
- annual averages of multilateral climate finance would be reduced by $5.69 bn (76% reduction)

Therefore, annual averages of climate finance received in the Asia region would be reduced by $8 billion simply by accounting for debt service payments, interest, administration fees, and other costs associated with debt burdens. This represents 57% less than the total face value of climate finance provided in the region per year.

BY BILATERAL PROVIDERS

Bilateral Provider (10 largest)	Total Climate Finance (2013-20) ($mn)	Annual Ave. Climate Finance ($mn)	Grants	Concessional Debt Instruments	Non-concessional Debt Instruments	Equity & Shares in Collective Investment Vehicles	Annual Ave. Grant Equiv. ($mn)	Grant Equiv. (%)
Japan	28,225	3,528	123	3,405	0	0	2,472	70%
Germany	11,229	1,404	249	1,150	0	5	617	44%
France	6,039	755	10	741	0	4	308	41%
United States	2,407	301	240	0	61	0	240	80%
EU Institutions (excl. EIB)	1,059	132	132	0	0	0	132	100%
United Kingdom	878	110	103	0	0	6	110	100%
Korea	716	89	28	62	0	0	74	83%
Australia	596	74	74	0	0	0	74	100%
Norway	541	68	68	0	0	0	68	100%
Switzerland	318	40	40	0	0	0	40	100%
Total*	**53,040**	**6,630**	**1,178**	**5,371**	**62**	**20**	**4,262**	**64%**

Table 12: The annual average climate finance provided from Bilateral sources between 2013-20, the proportion of financial instruments and an estimate of the grant equivalence of the finance.

*Total is for all bilateral DAC members providing finance according to OECD-DAC data, not just those listed.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

BY MULTILATERAL PROVIDERS

Multilateral Provider	Total Climate Finance (2013-20) ($Mn)	Annual Average Climate Finance ($Mn)	Grants ($Mn)	Concessional Debt Instruments ($Mn)	Non-concessional Debt Instruments ($Mn)	Other (Equity, Collective Investment Vehicles, Non-concessional grants) ($Mn)	Annual Average Grant Equiv. ($Mn)	Grant Equiv. (%)
WB*	30,073	3,759	76	1,671	2,012	0	951	25%
*IBRD**	15,119	1,890	0	0	1,890	0	0	0%
*IDA**	14,953	1,869	76	1,671	122	0	951	51%
AsDB*	17,593	2,199	60	262	1,809	68	265	12%
EIB*	5,833	729	0	40	455	17	145	20%
CIF	1,886	236	45	191	0	0	146	62%
GCF	1,369	171	85	0	86	0	85	50%
AIIB*	1,148	143	0	0	143	0	0	0%
GEF	1,021	128	128	0	0	0	128	100%
IFAD	635	79	10	44	25	1	33	42%
NDF	83	10	7	3	0	0	9	84%
Adaptation Fund	53	7	7	0	0	0	7	100%
GGGI	23	3	3	0	0	0	3	100%
FAO	1	0	0	0	0	0	0	100%
Total***	**59,717**	**7,465**	**420**	**2,211**	**4,531**	**85**	**1,772**	**24%**

Table 13: The annual average climate finance provided from Multilateral sources between 2013-20 according to OECD-DAC data, the proportion of financial instruments used and an estimate of the grant equivalence of the finance. A breakdown of the two institutions making up the World Bank are provided – IDA & IBRD.

*Denotes MDB.

**Remaining 21% of EIB finance are debt instruments without defined concessionality.

***Total is for all multilateral providers, not just those listed.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

BY RECIPIENT COUNTRY

Recipient Country	Total Climate Finance ($mn) (2013-20)	Annual Ave. Climate Finance ($mn)	Grants	Concessional Debt Instruments	Non-concessional Instruments	Equity and shares in collective investment vehicles	Annual Ave. Grant Equiv. ($mn)	Grant Equiv. (%)
India	36,818	4,602	134	2,643	1,811	14	1,685	37%
Bangladesh	13,997	1,750	171	1,206	373	0	908	52%
China	11,911	1,489	66	217	1,204	1	153	10%
Indonesia	9,981	1,248	253	605	389	0	587	47%
Philippines	7,775	972	80	528	364	1	438	45%
Pakistan	7,654	957	101	484	370	2	362	38%
Viet Nam	7,309	914	122	693	98	0	494	54%

Myanmar	3,376	422	67	355	0	1	289	69%
Nepal	3,298	412	98	266	48	1	252	61%
Sri Lanka	2,842	355	24	201	129	0	143	40%
Cambodia	2,149	269	69	187	12	0	170	63%
Thailand	1,654	207	16	119	72	0	106	51%
Afghanistan	1,601	200	200	0	0	0	200	100%
Laos	916	115	54	51	8	1	86	75%
Bhutan	300	38	22	10	6	0	27	73%
Timor-Leste	264	33	27	6	0	0	30	91%
Maldives	250	31	20	6	6	0	25	80%
Malaysia	52	7	7	0	0	0	7	100%
South Asia, regional	232	29	27	1	0	0	28	96%
Far East Asia, regional	311	39	35	2	2	0	37	95%
South & Central Asia, regional	64	8	7	1	0	0	8	100%
Grand Total	**112,757**	**14,095**	**1,598**	**7,582**	**4,893**	**21**	**6,034**	**43%**

Table 14: The annual average climate finance received by Asian nations between 2013-20 according to OECD-CRS data, the proportion of financial instruments used and an estimate of the grant equivalence of the finance.

% may not total 100% due to rounding errors.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

3.3 FINANCE RECEIVED VS. FINANCIAL NEED

Many Asian nations have outlined their "costed needs" related to climate finance provision for mitigation and adaptation objectives (see section 1.5). These costed needs can come from a range of sources.

It is therefore possible to consider the gap in finance between finance needs and the amount of public international finance flowing to the region, while acknowledging the need for other sources of funding to play their part in closing the needs gap. Comparing costed needs with the provided amount of finance comes with its limitations, as different countries have different methodologies for reporting costed needs and some don't even do so at all, such as Thailand. These limitations are outlined in section 1.5. With the available data, the following analysis can be made.

Annually, Asian nations received an average of $14.3 bn over the period 2013-20. Finance has risen over that period, such that the amount of finance received in the final year was $20.2 bn. In comparison, the costed finance required for the period 2022-30 according to the countries' NDCs represents an average of $1,311 bn per year.

The amount of public climate financing received by WCAS nations in the period 2013-20 (both reported totals and by CSNA measure), in comparison to the equivalent annual financing they will require in 2022-30 is laid out in Figure 14.

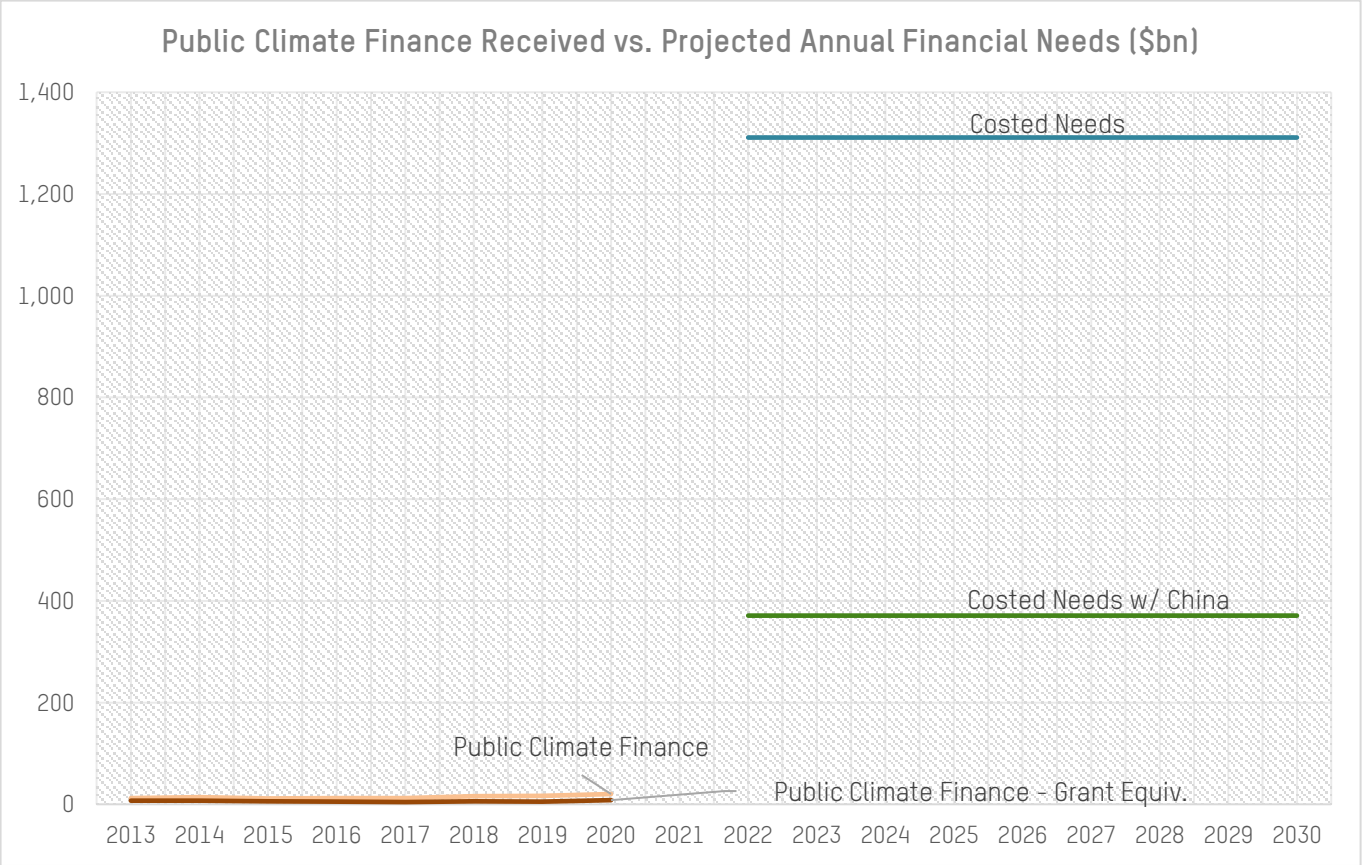

Figure 14: The historical amount of public climate finance (2013-2020) reported by international providers as entering Asia and the Grant Equivalent measure compared to the projected costed needs of those nations, represented as the annual average amount of finance required between 2022 and 2030.

Estimated financial needs gap to be made up by both international public flows and private sector flows from international and domestic sources. Costed needs total provided with two versions, one included Chinese costed needs and one without.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective & UNFCCC Country Reports.

The region has a large amount of domestic public climate finance and private climate finance.[74] East Asia and Pacific, which includes developed countries such as Japan is calculated to have had $292 bn in climate finance through all flows (public and private, domestic and international). This is broken down into $180 bn of public and $113 bn of private finance. The South Asia region, which does not have developed countries in the region, has far less - $30 bn in total, $19 bn of which is public and $11 bn of which private climate finance. These estimations incorporate the estimates made within this study, and then add estimates of domestic public finance, and then all forms of private finance to the regions (i.e., climate finance that doesn't "count" under the $100 bn commitment).

These other flows of climate finance are important to factor in when talking about the financial gaps making up costed needs. This is because costed needs include all forms of climate finance, not just international public finance. Therefore, the financial gap to be made up is not expected to purely be filled by international public flows, but to come from a range of sources.

3.4 GENDER-RESPONSIVE CLIMATE FINANCE

Bilateral providers are required to give gender-equality markers to each concessional activity reported to the OECD (i.e., ODA). Gender-equality markers use the same three-step scale as Rio markers, whereby a score of "0" indicates it is not an objective of the activity, "1" indicates it is a significant objective, and "2" a principal objective. Of all the bilateral climate finance provided to Asia in the latest two years (2019-20), 51% has a gender marker of "significant", 1% has a marker of "principal", with the remaining 48% being either un-marked or recording a gender marker of "0".

Proportion of Gender Integrated finance	Principal Objective	Significant Objective	Not targeted	Not screened (blank)
Bilateral	1%	51%	44%	4%
MDBs	0%	30%	5%	65%
Other Multilaterals	0%	51%	0%	48%
Total	1%	40%	22%	38%
Global Ave. (2019-20)	3%	31%	21%	46%

Table 15: Proportion of finance committed in the years 2019-20 to Asia which has an OECD Gender Equality marker assigned to it.

Note: Multilateral providers are not mandated to mark their finance, while bilateral providers are for concessional finance, but not for non-concessional finance.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

Multilateral providers are not required to gender-mark their finance reported to the OECD; however, some organisations elect to. Only 30% of finance from MDBs has a gender marker, which is nearly entirely composed of activities marked with a "significant" objective. Other Multilaterals have similar levels of "Significant"-marked finance as bilateral providers, though less "Principal" finance (see Table **15**). Overall, these figures tend above the estimated global averages per provider type.

It should be noted that the proportion of finance with a gender marker across all providers has increased over the eight-year period of 2013-2020. While this is a step in the right direction, climate finance needs to better take into account the gendered impacts of climate in order to improve efficacy.[75]

3.5 CLIMATE FINANCE BY SECTOR

The largest sector receiving climate finance is the Transport & Storage sector, which received nearly a third of all climate finance provided to the region. In close second, the Energy sector received a quarter of all climate finance. These two sectors dwarf all other sectors, collectively making up 58% of all climate finance to the region (see Figure 15).

There sectors are unsurprisingly dominated by mitigation finance. In the years 2019-20, only 23% and 4% of the finance to Transport & Storage and Energy targeted adaptation objectives respectively.

While these two infrastructure-heavy sectors dominate overall, other sectors have experience higher growth rates in comparison. Certain sectors are emerging as climate relevant as priorities move away from mitigation and infrastructure. Particular high growth areas include Health (+427%), Business & Other Services (+336%), and Emergency Response (+218%). Health and Emergency Response in particular are geared towards adaptation objectives, while the majority of sectors outside of the infrastructure-dominated sectors tend towards adaptation finance rather than mitigation.

While this emergence of new adaptation-relevant sectors is welcome, the rate at which growth must occur needs to increase quickly to meet the adaptation needs of recipient countries, to the point where infrastructure financing is no longer the dominant focus of climate finance.

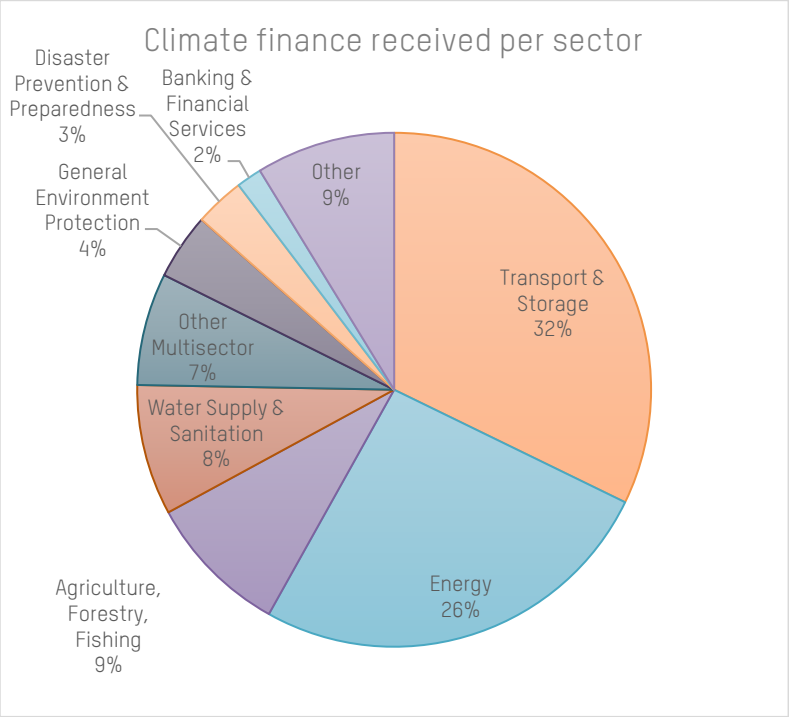

Figure 15: The proportion of climate finance marked as going to each sector (top 8 largest sectors included).
Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

Sector	Climate Finance Total ($bn) (2013-2020)	Sector Growth (2019-20 Compared to 2013-18 Baseline Ave.)	% 2019-20 Finance targeting Adaptation
Transport & Storage	36.53	67%	23%
Energy	29.36	-6%	4%
Agriculture, Forestry, Fishing	10.18	34%	68%
Water Supply & Sanitation	9.31	92%	74%
Other Multisector	8.01	117%	78%
General Environment Protection	4.71	-15%	48%
Disaster Prevention & Preparedness	3.56	53%	86%
Select other high growth sectors			
Banking & Financial Services	1.81	129%	48%
Government & Civil Society	1.33	167%	67%
Education	0.75	146%	48%
Health	0.61	427%	85%
Business & Other Services	0.31	336%	50%
Communications	0.26	116%	83%
Emergency Response	0.18	218%	96%
Others	6.49	-	-
Grand Total	**113.4**	**42%**	**40%**

Table 16: The top 7 largest sectors receiving climate finance in the period 2013-2020 and their growth in the last two years of available data 2019 & 20.
Select other high growth sectors included to show sectoral trends. Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

3.6 CHANNEL OF DELIVERY – LOCALLY LED FINANCE

It is increasingly apparent in the literature that to bring about lasting climate action, projects and programmes must be locally led.[76,77] Local communities on the frontline of climate change do not currently have sufficient say in how the climate finance affecting them is governed. To switch away from a top-down approach, providers need to embrace locally led climate finance. However, whether funding reaches to the local level is difficult to assess.

The degree to which finance is locally led is difficult to assess due to the lack of transparency on this information. Table 16 attempts to demonstrate the finance which has the potential to be locally led; by highlighting (in grey) delivery channels which are institutions in the recipient nation below the national level.

In total, these four channels (Developing country-based NGOs, Private sector in recipient country, Local Government, and Other public entities in recipient country) make up just 0.5% of the total finance to Asian nations. Of particular note is the channel relating to local government, which represents a strong likeliness of finance that could be considered "locally led", while others, such as finance to "other public entities in recipient country" may not fit this description. Climate finance in Asia which is channelled to local government makes up just $15 million across the years 2013-20 ($1.8 Mn annual average), or just 0.01% of total climate finance.

In contrast, the dominant channel of delivery is through the recipient government, making up two thirds of all climate finance to the region.

Channel Rank	Channel of Delivery	Climate Finance ($bn)	% Total finance
1	Recipient Government	75.38	66.5%
2	Central Government	11.20	9.9%
3	Other	6.42	5.7%
4	(blank)	4.74	4.2%
5	Public Sector Institutions	3.37	3.0%
6	Asian Development Bank	1.45	1.3%
7	Public corporations	1.22	1.1%
Select channels with potential for locally led finance			
15	Developing country-based NGO	0.36	0.3%
19	Private sector in recipient country	0.25	0.2%
58	Local Government	0.01	0.0%
70	Other public entities in recipient country	0.01	0.0%

Table 17: The largest channels of delivery by finance committed.

All channels delivering more than 1% of total finance shown. Select channels of delivery which are most likely to incorporate finance which could be considered locally led. "(Blank)" category are those projects without a specified channel of delivery.

Data source: OECD (2022a). Climate Change: OECD-DAC External Development Finance Statistics - Recipient perspective.

4 CLIMATE FINANCE MOBILIZED BY NON-OECD ECONOMIES IN ASIA (SOUTH – SOUTH FLOWS)

Article 9 of the Paris Agreement first states that Developed country Parties shall provide financial resources to assist developing country Parties. It follows this by encouraging "Other Parties" to provide such support voluntarily, while stipulating that developed country parties should continue to take the lead in mobilizing said resources (see box 7).

The region of Asia has several countries which voluntarily provide development assistance, often targeted most prominently to their neighbours in the region. This chapter explores the regional south-south flows of climate-related development finance.

Box 7. Article 9.1 & 9.2, the Paris Agreement[78]

"1. Developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention.

2. Other Parties are encouraged to provide or continue to provide such support voluntarily."

4.1 CHINA AND INDIA

The largest provider of south-south flows is China. Estimates from the Boston University (BU) Global Development Policy (GDP) Center, which tracks Chinese overseas financing, suggests Chinese policy banks committed a total of $467 bn in overseas development finance (ODF) between 2008 and 2019 across all sectors. In the years comparable to this study (2013 to most recent year available), this figure is estimated at $287 bn, or an average of $41 bn per year.

Asia is a priority for Chinese ODF, and this is reflected in the fact that $84 bn was committed to the region over the same period (2013-19). This finance was directed to 13 of the 18 countries considered in this report. The largest recipient by a clear margin is Pakistan, receiving $31.4 bn, followed by Indonesia ($10.8 bn), Bangladesh ($10.4 bn), and Philippines ($9.9 bn).

The proportion of this finance that is climate-relevant is an imprecise science but can be estimated (see Annex 1 for detailed methodology).

Of the $84 bn in regional flows, it is estimated that up to $35.2 bn can be considered as relevant to mitigation objectives. In particular, these mitigation actions relate to "Transport", "Power", and "Government" sectors. The dominant sector is transport, which makes up $20.9 bn worth of mitigation finance. Second is the power sector, with $13.9 bn, followed by $0.4 bn in mitigation funding to the government sector.

The second largest country after China – India – has in recent years grown its regional climate finance provisions. India's support comes through various instruments; Lines of credit (LoC), grants, small development projects, technical assistance, disaster relief, humanitarian aid and capacity building support.

The Indian Biennial Update Report (BUR) outlines in narrative form the provision of over $2 billion worth of climate-related finance, primarily through lines of credit ($1.4 bn). The largest channel through which these funds flow is the International Solar Alliance (ISA), an Indian initiative founded in 2018 in partnership with France which contributes to the Paris Agreement through the deployment of solar energy across the developing world. $300 mn of these ISA LoCs are provided to Bangladesh and Sri Lanka for funding solar projects.

Another initiative India has opened is a $50 mn 'Commonwealth Sub Window' to provide grants for SDG implementation and climate action. Focus has been with Small Island Developing States, for example with early warning systems for seven Pacific Island countries. India has further helped SIDS governments attend international fora such as the UN and WTO.[79]

China and India are contributors to international climate-related multilateral institutions. For example, both contributed to the eighth replenishment of resources to the Global Environment Facility (GEF) Trust Fund.[80]

4.2 OTHER REGIONAL CONTRIBUTORS

Regional south-south support is not limited to the two largest countries (China and India), with **Indonesia** ($0.8 mn) and **Vietnam** ($1 mn) contributing to the Green Climate Fund's (GCF) resource mobilization efforts.[81] The GCF has come under criticism for delays in delivering funds and how those funds are allocated and the difficulty in accessing them. Despite this, the contributions of countries which also qualify as recipient countries demonstrates a commitment to the principles behind the GCF's establishment and an acknowledgement of the need to act through international solidarity.

In response to climate finance access issues, Indonesia has established the Indonesia Climate Change Trust Fund (ICCTF) with the purpose of developing innovative ways to link international and domestic investment strategies.[82]

Singapore has also pushed forward with regional development work. This includes the Climate Action Package (CAP) under the Singapore Cooperation Programme, which focuses on providing technical assistance on climate science, flood management, and disaster risk reduction, to developing countries in the region.[83] Furthermore, Singapore acts through its ASEAN partnerships on capacity building for the purpose of Paris Agreement implementation.[84]

Such south-south cooperation is laudable and also reflects the diversity of respective capabilities of Asian nations, as demonstrated in section 1.4.

5 CONCLUSIONS AND RECOMMENDATIONS

Asia is characterised by being particularly exposed to climate hazards, from droughts and heatwaves to flooding and cyclones, the region will take on a huge amount of risk in whichever future pathway it takes.

While it has been difficult for many developing nations in the region to accurately state the financial support required to build climate resilient and green societies, it is clear vulnerable communities are not able to adapt to current and future climate stressors without international support. The amount of climate finance thus far provided to the region does not come close to covering the costs related to transitioning to a green economy, nor adapting to the fast-changing climate. While North-South flows are increasing each year, they do not increase at the scale required, nor do they target the adaptation outcomes most needed.

The urgency for adaptation finance is pressingly urgent and must be grant based, or at the very least deeply concessional, in nature. Frontline communities do not have the capacity to pay back loans and would be further pushed into debt if they are forced to use them. Therefore, it is at the local level that this grant-based adaptation funding must be channelled to have the greatest impact.

International climate finance providers must recognise this reality and shift towards the development of climate resilient communities as a priority. If the adaptation funding gap continues, losses and damages in Asia will continue to mount, and the cost of recovery will mount with them.

KEY FINDINGS

1. At its face value, $113 billion in climate finance was committed to South & South-East Asia between 2013-2020, an average of **$14 billion per year**. 47% of this was provided through bilateral finance, compared to 53% from multilaterals.

2. Annual climate finance has **risen from $12 bn in 2013 to $20.5 bn by 2020**. In 2020, this equated to approximately one quarter of global public climate finance.

3. Of the $113 bn committed between 2013-20, the total **grant equivalent** value of climate finance was just $49 bn (43%), or an **annual average of $6.1 bn**.

4. On average, bilateral providers have a **64% grant equivalence**, compared to just **20%** for Multilateral Development Banks.

5. **Japan** is the largest bilateral provider of climate finance to the region, committing **$28.2 bn** between 2013-2020. **70%, or $19.8 bn** is estimated to be grant equivalent. The **Asian Development Bank** is the largest single multilateral provider of climate finance to the region, committing **$24.6 bn** between 2013-20, **$17.6 bn** of which is

attributable to developed country sources. However, **only 12% of the $17.6bn, or $2.1 bn,** is estimated to be grant equivalent. The **World Bank** contributed **$30 bn** in climate finance attributable to developed country sources ($15.1 bn from IBRD, 0% grant equivalence; $15.0 bn from IDA, 51% grant equivalence).

6. Over the period 2013-2020, **two thirds** of climate finance in Asia was directed to **mitigation** objectives, compared to **one third for adaptation**.

7. While the **mitigation-dominated** sectors of Transport & Storage (32%) and Energy (26%) are the largest to receive climate finance, certain **other sectors are experiencing high growth**, namely, Health (+427%), Business & Other Services (+336%), and Emergency Response (+218%).

8. The cumulative **costed needs** of Asia according to recipient country UNFCCC reports is **$11.8 trillion** by 2030 (or $1.3 trillion each year for the next 9 years), dropping to **$3.2 trillion** (or $372 bn per year for 9 years) when excluding China's costed needs.

9. There has been a **promising up-tick** of +28% in climate finance committed in the final year analysed (2020) compared to the previous year, though this remains **well below the trajectory required** to meet costed needs by 2030.

10. **Estimating costed needs is a challenge** for many governments, resulting in a range of methodologies and subsequent estimates. There is a **lack of standardisation** of costed needs in UNFCCC reporting mechanisms.

11. **41%** of Asian climate finance has **gender integrated** into the programmes funded, compared to 21% with no gender integration, and 38% which is not screened for gender at all.

12. The degree to which finance is locally led is difficult to assess due to the lack of transparency on this information. Attempts to estimate this suggest that only about **0.5%** total finance is **locally led**.

RECOMMENDATIONS

Recommendation 1: International climate adaptation finance to the climate vulnerable regions of Asia is scaled-up.

a. Adaptation finance to each Asian recipient country is doubled by 2025 in line with the goals of the Glasgow Climate Pact.

b. All providers to the region commit to significantly increase grant-based finance and ensure that adaptation constitutes a minimum of 50% of their overall public climate finance contribution. This finance should be allocated in a way that is pro-poor, gender transformational, and prioritises those who are most vulnerable.

c. Adaptation finance is delivered to Asia in line with the eight Principles for Locally Led Adaptation.[85]

d. A new goal specifically for adaptation is included as a component of the New Collective Quantified Goal on Climate Finance (post-2025 goal).

Recommendation 2: The accounting standards of the providers of climate finance are improved.

a. Bilateral providers of climate finance to Asia report grant equivalence as mandatory in the UNFCCC's transparency reporting framework.

b. Bilateral parties agree that non-concessional finance will not be counted towards UNFCCC climate finance obligations.

Recommendation 3: The quality of costed needs assessments is prioritised for improvement by all countries.

a. Asian nations collaborate and advocate for a standardised costed needs reporting format to be included in Nationally Determined Contributions.

b. Technical assistance is provided to developing countries in Asia to enhance the quality and accuracy of costed needs assessments.

c. Asian nations ensure they provide clarity over their conditional vs. unconditional costed needs.

ANNEX: METHODOLOGY

This annex describes the methods used for this study. The methodology uses a combination of data sources, which are listed below and elaborated upon in the following Annex sections:

A. North-South Flows

- OECD DAC Climate Related Development Finance Statistics – from the Recipient Perspective for years 2013-2020[86]

B. South-South Flows

- Boston University Global Development Policy Center[87]
  - China's Global Energy Finance Database[88]
  - China's Overseas Development Finance Database[89]
- Biennial Update Reports[90]

C. Auxiliary Data Sources

- Notre Dame Global Adaptation Index[91]
- Poverty and extreme poverty statistics[92]
- Debt Sustainability Framework[93]
- Nationally Determined Contributions[94]
- Country statistics (exchange rates, population, Gross National Income)[95,96]

A. NORTH-SOUTH FLOWS

The methodology is a modified version of the methodology used in the Oxfam Climate Finance Shadow Report 2020,[97] but applying a recipient perspective (instead of a provider perspective) tailored to the Asia region; specifically, the ODA-eligible recipient countries of Afghanistan, Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Laos, Malaysia, Maldives, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Timor-Leste, and Vietnam. In alignment with the Shadow Report methodology, this study calculates the climate finance flowing to the region from all sources relevant to be counted under the $100 bn commitment of the Copenhagen Accord,[98] i.e., international public climate finance.

The shadow report methodology is to use a combination of two main data sources. Firstly, the UNFCCC Annex II nations' Biennial Reports (BRs),[99] and secondly the Climate Change: OECD DAC External Development Finance Statistics dataset which is derived from the OECD's Creditor Reporting System (CRS).[100] Due to the delay deadline for submission of BR5 reports, spanning the years 2019 and 2020, it has not been possible to use BR data to for the purpose of this study. Instead, this study uses only the OECD DAC dataset. This issue has arisen for the latest version of the shadow report as well, which has resulted in delayed publication commensurate with the reporting delay.

The latest version of the OECD DAC dataset has been downloaded and used to make calculations of climate finance flowing to the Asia region. The calculations form the basis of all data analysis presented in Chapters 0 and 4.

To provide further descriptive analytics, auxiliary data sources are called upon. These sources include:

- Notre Dame Global Adaptation Index[101]

- Poverty and extreme poverty statistics[102]
- Debt Sustainability Framework[103]
- Nationally Determined Contributions[104]
- Country statistics (exchange rates, population, Gross National Income)[105,106]

The methodology for calculating the required figures from the primary data source (OECD DAC) is outlined in this chapter, as well as a description of the auxiliary data sources used for recipient country analysis.

OECD CRS DATASET

The OECD-DAC provides the most extensive publicly available record of international development finance flows in its Creditor Reporting System (CRS) database.[107] From this database, the OECD-DAC generates a climate-related development finance dataset called "Climate Change: OECD DAC External Development Finance Statistics".[108] This dataset is available from both a provider and a recipient perspective, in commitments (no disbursements data available). To understand flows to the S&SE Asia region, the recipient perspective dataset is applied.

The recipient dataset contains two broad categories of climate finance: (1) activities provided and reported by developed countries with climate change objectives (i.e., with Rio Markers applied to either climate adaptation or mitigation or both), and (2) the outflows of climate finance from multilateral organisations. Taking the "Climate Change: OECD DAC External Development Finance Statistics" dataset as a point of departure, it is possible to arrive at estimates of climate finance totals.

Furthermore, the dataset includes information relating to, among others, activity level integration of gender objectives, the channel of delivery, and the sector targeted. The following section describes how the recipient dataset was gathered and processed, and the calculations that were made from it.

Data Gathering and Processing

The OECD Climate Finance Statistics Recipient Perspective data set was downloaded on 24th August 2022 and filtered for the years 2013-2020. No data cleaning is required of the OECD DAC dataset.

Limitations of this dataset

This dataset contains the following specific limitations for the purposes of this study.

- The data is only provided in commitments.
- As some reporting nations to the UNFCCC elect to report using different methodologies (there is no standardised method), e.g., using disbursements instead of commitments, or not reporting non-concessional finance as climate finance, there will be some discrepancy between the two analyses. The OECD DAC dataset can therefore only be considered as a forecast of (yet to be published).
- official figures.
- The CRS data is updated every quarter, and can also be updated retrospectively (which the BRDI data tends not to be, unless the UNFCCC receives an updated submission), reducing comparability between third party analyses over time (e.g., Carty et al., 2020[109]).

Filtering of Asia recipient countries / regions

The OECD has a standardised list of recipient countries/regions by which countries can report their activities against. Therefore, the following country or region criteria were used to filter climate finance relevant to the Asia region (OECD DAC recipient codes[110] in brackets):

- Far East Asia: Cambodia (728), China (People's Republic of) (730), Indonesia (738), Lao People's Democratic Republic (745), Malaysia (751), Philippines (755), Thailand (764), Timor-Leste (765), and Viet Nam (769).
- South & Central Asia: Afghanistan (625), Bangladesh (660), Bhutan (630), India (645), Maldives (655), Myanmar (635), Nepal (660), Pakistan (665), and Sri Lanka (640).

South & Central Asia		Far East Asia
South Asia	*Central Asia*	
Afghanistan	Armenia	Brunei Darussalam
Bhutan	Azerbaijan	**Cambodia**
Myanmar	Georgia	**China (People's Republic of)**
Sri Lanka	Kazakhstan	**Indonesia**
India	Kyrgyzstan	DPR of Korea
Maldives	Tajikistan	Korea
Nepal	Turkmenistan	**Lao PDR**
Pakistan	Uzbekistan	**Malaysia**
Bangladesh		Mongolia
		Philippines
		Singapore
		Thailand
		Timor-Leste
		Viet Nam

Table 18: OECD-DAC regional classifications of recipient countries in Asia. Countries included in this study highlighted in green and bold text.

Using the OECD-Development Assistance Committee (DAC) classification system there are two primary regions relevant to this study: "Far East Asia", and "South & Central Asia".

Within "South & Central Asia", there is a further subdivision between "South Asia" and "Central Asia". All of the countries of interest in the South & Central Asia region lie in the South Asia subdivision. Therefore, any regional finance flowing to "Central Asia" is omitted from this study. Regional finance flowing to South Asia is included, as is finance flowing to the larger region of "South & Central Asia", despite the caveat that this finance may also in part flow to countries in Central Asia (e.g., Turkmenistan, Uzbekistan, Kazakhstan, etc.)

The "Far East Asia" region 14 recipient countries, 9 of which are included in this study. Of those countries which are excluded, the majority are MADCTs (More Advanced Developing Countries and Territories) and excluded on that basis. The two exceptions of DPR Korea (Other LIC) and Mongolia (LMIC), that are excluded as they are not Oxfam operational countries.

The limitations related to filtering by region, is that there are two ODA-eligible Far East Asian countries (DPR of Korea and Mongolia) not included and

eight South & Central Asian countries (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan) not included in this study. Therefore finance allocated on a regional basis may be being disbursed to countries outside the scope of this study. To mitigate this impact, regional finance is analysed separately where possible.

There is also the limitation that any finance labelled as directed to "Asia" on a regional basis is not captured in this list, despite potentially having funds dispersed to one or more of the 18 study countries listed above.

Data Processing

Further columns were added to the OECD DAC dataset to provide requisite information to present the analysis in pivot tables. These columns contain calculations based on the publicly available data.

These calculations include:

- Adjustment for developed countries share of multilateral donors' finance.
- Adjustments for Rio marker scores (climate relevance).
- Calculation of the grant equivalence of commitments.

These calculations are described in the following sections.

Adjustment for developed countries share of multilateral donors' finance

The OECD climate finance statistics recipient perspective dataset includes multilateral provider outflows (rather than inflows as contained in the provider perspective). As this data incorporates all outflow data reported by multilateral institutions, it includes multilateral finance generated from all sources (i.e., finance paid in by developed country parties, as well as that paid in from developing countries, raised from financial markets, raised from earnings on investments, etc.). To ensure only finance relevant to the $100 bn pledge is included for the relevant chapters, outflow data is corrected to only include the share attributable to developed countries.

The OECD DAC provides an estimate of shares attributable to developed country parties from all relevant multilateral institutions (OECD, 2021). This corrective percentage was applied to each individual outflow activity from multilateral providers.

Rio Marker Accounting Methodology

Within the widely used 'Rio marker methodology', there is no uniform standard coefficient to be applied to a budget to assess the proportional relevance to a Rio convention objective. While "0" and "2" can logically be applied coefficients of 0 and 100 (%), the application of a coefficient for the "significant" (1) Rio marker, brings inconsistencies (Carty et al., 2020). A range of coefficients between 1% and 100% are applied by various Annex II nations to projects with a "significant" score (see Table **19**). To create a standardised and comparable dataset, the OECD DAC data is adjusted so that Rio marker scores of "1" result in a financial adjustment of 40%.

Country	Reporting method	Principal	Significant	Cross-cutting *(at least one principal score / two significant scores)*	Measurement basis
Australia	Aggregated	100%	30%	100%/30%	Disbursements
Austria	Aggregated	100%	50%	100%/50%	Commitments
Belgium	Case-by-case			/40%	Disbursements

Bulgaria	Other	Not Annex II	Not Annex II	Not Annex II	Not Annex II
Canada	Aggregated	100%	30%	100%/30%	Disbursements
Czech Republic	Aggregated	100%	100%	100%	Commitments
Denmark	Aggregated	100%	50%	100%/50%	Disbursements
EU	Aggregated	100%	40%	100%/40%	Commitments
Finland					
France					
Germany	Aggregated	100%	50%	100%/50%	Other
Greece	Aggregated	100%	40%	100%/40%	Disbursements
Hungary	Other	Not Annex II	Not Annex II	Not Annex II	
Iceland					
Ireland	Aggregated	100%	40%	100%/40%	Disbursements
Italy	Aggregated	100%	40%	100%/40%	Other
Japan	Aggregated	100%	50%	100%/50%	Commitments
Luxembourg					
Netherlands	Aggregated	100%	40%	100%/40%	Disbursements
New Zealand	Aggregated	100%	30%	100%/30%	Disbursements
Norway	Aggregated	100%	40%	100%/40%	Disbursements
Poland	Aggregated	100%	100%	100%	Disbursements
Portugal					
Slovakia	Case-by-case				
Spain	Aggregated	100%	50%	100%	Disbursements
Sweden	Aggregated	100%	40%	100%/40%	Disbursements
Switzerland	Aggregated	85%	50%	85%/50%	Disbursements
United Kingdom	Other				
United States	Case-by-case				

Table 19: Summary of coefficients or other adjustments applied by providers to Rio Markers data to compile data for the UN Conventions, 2019-20 data.
Source: https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DCD/DAC/STAT(2022)24&docLanguage=en

Grant Equivalence Calculations

To calculate the grant equivalence of bilateral finance, it possible to use the 'bulk' CRS dataset.[111] The bulk CRS dataset is the database from which the OECD's climate finance statistic dataset is derived. Due to the April 2016 OECD-DAC directive, all bilateral flows recorded under the CRS dataset from the reporting year of 2018 onwards must also include a grant equivalence measure on debt-based finance (OECD/DAC, 2016). This information can therefore be used to calculate the average grant element (i.e., proportion of debt instruments which can be considered as grant equivalent) of debt climate finance from each provider country.[112]

In the case of data gaps, an average across all provider countries is used. For the Oxfam Shadow Report 2020 this average was 49.8%.[113] For this study, the calculated average across all available provider data for the years 2018, 19, and 20 is 52.6% (49.8% for 2018,[114] 55.0% for 2019, and 53.0% for 2020) (see Table **20**). For grant equivalence calculations prior to the available data period of 2018-20, the average over the three-year period is applied. Due to a lack of data on the concessionality of loans from multilateral providers, and the definition of concessionality which these providers use, the average for all bilateral providers is applied.

Non-concessional instruments are assigned a grant equivalence of zero. While some finance defined as 'non-concessional' may include some level of concessionality (grant equivalence), for bilateral finance it is not generous enough to be ODA-eligible, and as such is

Bilateral Provider	Grant Element (2018, 19, 20 ave.)
Austria	34.9%
Belgium	79.4%
Canada	81.7%
France	38.7%
Germany	31.6%
Italy	73.4%
Japan	69.0%
Korea	78.3%
Poland	85.1%
Spain	35.8%
UK	30.1%
Total	52.6%

Table 20: Grant Element percentages calculated for debt instruments provided by provider nations to climate-relevant finance in the years 2018, 19 &, 20, source: CRS bulk dataset.

not counted as assistance due to the burden that debt places on developing countries. The same principle is assumed for MDB finance defined as 'non-concessional'.

B. SOUTH-SOUTH FLOWS

In order to calculate the south-south regional development flows for chapter 5, a variety of sources were analysed.

BU GDP datasets

The only statistical datasets assessed were Boston University's Global Development Policy datasets on Chinese Overseas Development Finance (ODF) and Chinese Overseas Energy Finance. These datasets were downloaded on 31 July 2022.

An assessment on the same principles of the Rio Marker methodology to identify mitigation and adaptation objectives was made on projects included in these datasets. The assessment was made based on the project information available in the dataset, and therefore is limited by the information available therein.

Only projects directed to the relevant study countries were included. 190 projects were included in total, over the period 2013-2020.

BUR

The Indian Biennial Update Report provides detailed information of their south-south finance they consider climate-relevant. This information was used to consider the climate flows specific to the region in question.

Other

A range of other information related to south-south flows was collated, including financial contributions to multilateral funds such as the GCF, and government websites outlining climate-relevant contributions and assistance.

C. AUXILIARY DATA SOURCES - RECIPIENT COUNTRY ANALYSIS

To contextualise the analysis made of the flow of climate finance to S&SE Asia with regards to existing vulnerability, poverty, climate assistance needs and other relevant indicators allowing for a comparative analysis from a climate justice lens, a range of complementary data sources are utilised relating to the recipient countries themselves. These sources are described below.

NOTRE DAME GLOBAL ADAPTATION INDEX (ND-GAIN)

To make assessment of the relative 'needs' of recipients for adaptation financing, the country-specific ND-GAIN index is applied. This contributes to the analysis of whether article 9.4 of the Paris Agreement is being met in WCAS.[115]

The ND-GAIN Index considers a country's "vulnerability to climate disruptions [and] it also assesses a country's readiness to leverage private and public sector investment for adaptive actions"[116] . The index combines 45 indicators to assess climate vulnerability and readiness in 182 countries,

dating back to 1995. The Index score provides a number between 0-100 for each country, with higher scores allocated to the least vulnerable/most prepared countries. ND-GAIN can be presented on a scatter plot of readiness against vulnerability to climate change (see Figure 16).

There are numerous alternative indices related to a country's adaptive capacity, such as the Climate Change Vulnerability Index.[117] The ND-GAIN index was elected in part due to its emphasis on a country's ability to leverage public and private sector funding, which is highly relevant to the context of this study. This provides a good basis for the assumption that the ND-GAIN index has a strong inverse relationship with a country's relative need for adaptation financing. The index is also publicly accessible and has high usability, which complements its wide coverage. Adaptation and resilience are concepts which have evolved as research improves and as such are difficult objectives to monitor and create indices for. The ND-GAIN index is a world-renowned index and provides strong insight into the relative rankings of a nation's vulnerability to and readiness for climatic changes.

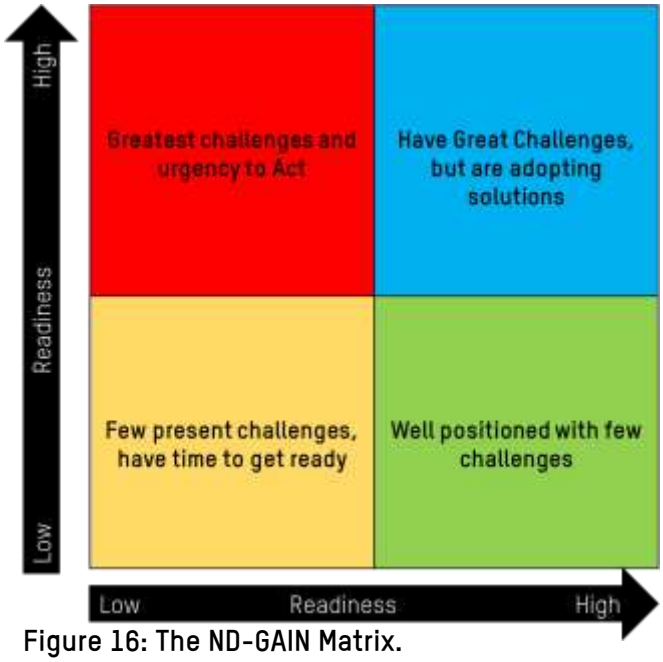

Figure 16: The ND-GAIN Matrix.
Source: adapted from Chen et al (2015).

POVERTY AND EXTREME POVERTY STATISTICS (WORLD BANK)

Data relating to the poverty and extreme poverty levels of Asian countries is utilised to contextualise findings. The following definitions of poverty and extreme poverty are applied: a poverty level of $5.50/day and an extreme poverty level of $1.90/day[118,119]

The $1.90/day definition is in line with the International Poverty Line. In 2017, an estimated 689 million people (9.2% of the global population) lived below this line.[120] The $5.50/day definition is another used by the World Bank and is derived from the average cost of living in upper-middle income countries (UMICs). In 2017, an estimated 3.3 billion people (43.6% of the global population) lived below this line.[121]

Oxfam elects to use the $5.50 poverty line as its primary measure, as it is considered to give the most accurate picture of overall poverty. The extreme poverty line gives focus to the most extreme vulnerable peoples and communities but overlooks billions who face poverty and are just a small shock away from destitution[122,123] In particular the most discriminated groups in society (e.g., the elderly, women, children, and indigenous peoples), who face the worst climate impacts, can still be neglected.[124]

The World Bank's PovcalNet tool is used to source poverty and extreme poverty data for the 18 S&SE Asia countries.[125] This data source also provides statistics relating to the Poverty Gap; the mean shortfall in income or consumption from the defined poverty line, measured as a percentage of that poverty line. The measure reflects the depth of poverty as well as its incidence.

It is important to note that as the time period for climate finance analysis is 2013-20, the effects of the Covid-19 pandemic are not reflected in this study.

INDEBTEDNESS (IMF/WORLD BANK)

Low-Income Countries Debt Sustainability Framework (IMF)

To understand the level of debt distress Asian countries are in, the joint IMF-World Bank Debt Sustainability Framework for Low-Income Countries (LIC-DSF) is used. The LIC-DSF is a method for conducting standardized debt sustainability analysis. The analysis provides information on a LIC's capacity to carry debt and its projected debt burden under both baseline projections and shock scenarios.[126]

The LIC-DSF is used by both LIC authorities and the international community to inform fiscal policy and assess debt-related risks, in particular when considering borrowing decisions, such as the type and concessionality of financial instruments. For example, the DSF is used by the International Development Association to determine the grant provisioning within a country's annual IDA resource allocation,[127] while many MDBs use it to inform lending policy.[128] The purpose of the LIC-DSF is to reduce risk of debt distress and help LICs achieve their development goals. The LIC-DSF uses a four-scale classification to assess the overall public risk of debt distress: Low, Moderate, High, In debt distress.

China, India, Indonesia, Malaysia, Pakistan, Philippines, Sri Lanka, Thailand, and Vietnamare not currently assessed under the LIC-DSF due to them no longer being a Poverty Reduction and Growth Trust (PRGT) eligible country.[129]

International Debt Statistics (World Bank)

To provide descriptive analysis of the status of indebtedness of the WCAS states, the World Bank Group's International Debt Statistics online databank is used.[130] The databank provides a time series of data related to a range of debt metrics; of particular use are those measuring the degree of external debt for each individual WCAS nation to all creditors.

Costed Needs Assessment

The S&SE Asia Country UNFCCC reports (NDCs, NCs, BURs, & NAPs – described in the main report text, page 17) are analysed to consider whether climate finance provisions take into account the stated financing needs of S&SE Asian countries.

It is important to note that there is no standardised method for calculating the financial or "costed" needs in each country's UNFCCC report submission (most commonly found in the NDCs). As such, the financial needs outlined by some countries are far higher than in others. As the NDR report states, "This does not imply that the latter have no or fewer needs; rather, this may be due to the lack of available data, tools, and capacity for determining and costing needs.".[131] This is a limitation to the comparability in analysis across S&SE Asian countries.

The World Bank's data visualization portal for INDC submissions[132] and the Climate Watch NDC exploration portal[133] were also used to identify key information from the submissions and corroborate online translation tools.[134,135]

GENERAL COUNTRY STATISTICS

More basic recipient country statistics are used to aid data analysis. All the information is sourced from the OECD or the World Bank where possible, to have a consistent data source with consistent data housing methodologies[136,137] These statistics include Population, Gross National Income (GNI), Exchange Rates.

ABBREVIATIONS AND ACCRONYMS

AsDB	Asian Development Bank
AR6	Assessment Report 6
BA	Biennial Assessment Report
BRI	Belt and Road Initiative
Bn	Billion
BR	Biennial Report to the UNFCCC
BU GDP	Boston University Global Development
BUR	Biennial Update Report to the UNFCCC
CIF	Climate Investment Funds
COP	Conference of the Parties
CHEXIM	Chinese Export Import Bank
CRS	Creditor Reporting System
CSNA	Climate-Specific Net Assistance
CSO	Civil Society Organisation
CTF	Common Tabular Format
DAC	Development Assistance Committee
DSA	Debt Sustainability Analysis
DSF	Debt Sustainability Framework
Ex-Im	Export-Import
FAO	Food and Agriculture Organization
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GGGI	Global Green Growth Institute
GHGs	Greenhouse Gases
GII	Gender Inequality Index
GNI	Gross National Income
HIPC	Heavily Indebted Poor Countries
IBRD	International Bank for Reconstruction
IDA	International Development Association
IFAD	International Fund for Agricultural De-
IFC	International Finance Corporation
IFI	International Financial Institution
IMF	International Monetary Fund
IPCC	International Panel on Climate Change
LDCs	Least Developed Countries
LECZ	Low-Elevation Coastal Zone
LIC	Low-Income Country
LNG	Liquid Natural Gas
LMICs	Lower-Middle Income Countries
MDB	Multilateral Development Bank
Mn	Million
NCs	National Communications
NDCs	Nationally Determined Contributions
ND-	Notre Dame Global Adaptation Index
NDF	Nordic Development Fund
NDR	Needs Determination Report
NGO	Non-Governmental Organisation
ODA	Official Development Assistance
OECD	Organisation for Economic Co-opera-
OOF	Other Official Flows
RM	Rio Marker
RMB	Chinese Renminbi
S&SE	South & South-East Asia
SOE	State-Owned Enterprise
UMICs	Upper-Middle Income Countries
UNFCCC	United Nations Framework Convention
USD	United States Dollar
WB	World Bank
WCAS	West and Central Africa / Sahel

NOTES

[1] The countries of Asia included in this study (ODA eligible countries only):

South Asia- India, Bangladesh, Nepal, Pakistan, Sri Lanka, Maldives, Bhutan, Afghanistan.

South-East Asia- Philippines, Timor-Leste, Indonesia, Vietnam, Myanmar, Cambodia, Laos, Malaysia, Thailand.

[2] The Climate Policy Initiative estimated in 2021 that the East Asia and Pacific region (including all developed countries in the region, such as Japan) received a total of $292 billion through all flows (both domestic and international) - $180 bn in public and $113 bn in private. In comparison, South Asia received $30 bn in total, $19 bn in public and $11 bn in private.

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