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Climate Finance in the Asia-Pacific: Trends and Innovative Approaches





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CLIMATE FINANCE IN THE ASIA-PACIFIC: TRENDS AND INNOVATIVE APPROACHES

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1. INTRODUCTION

While climate change is a global phenomenon, some geographic regions are being affected to a greater extent than others. The Asia-Pacific is one such region, hosting the largest number of poor people in the world who are also the most vulnerable to the impacts of climate change. It is well known that the Asia-Pacific is already the world's most disaster-prone region: in the past decade, about 3 million people in the region have been affected by disasters and almost 900,000 have lost their lives. A person living in Asia and the Pacific is almost twice as likely to be affected by a natural disaster as a person living in Africa; almost six times more likely than someone in Latin America and the Caribbean, and almost 30 times more likely than a person living in North America or Europe.¹ The ESCAP vulnerability index, which assesses each country's exposure and capacity to cope with economic crises, and the World Risk Index, which assesses the risk to natural disasters, when combined identified that countries the most at risk to disasters are the least developed countries and the Small Island Developing States -Bangladesh, Bhutan, Cambodia, Fiji and Papua New Guinea, for example, are at the greatest risk of natural disasters.² But not all are equally vulnerable, and Small Island Developing States in the Pacific have been identified as among the most vulnerable to climate change and natural disasters.³

The possibility that climate change may exacerbate the frequency and severity of extreme weather events is a real concern for the region. While all regions of the world are projected to experience varying impacts due to climate change, increases in flooding, heat-related mortality, and drought-related water and food shortages have been identified as the main risks in Asia. If current climate change and development patterns continue, by 2100, hundreds of millions of people, most of them in coastal areas of East, Southeast and South Asia, may be displaced unless adaptation measures are put in place. It has been estimated that in 2015, 410 million urban Asians will be at risk of coastal flooding, with a further 350 at risk of inland flooding.⁴ In the case of the Pacific Islands, several national capitals are under direct threat of total inundation rendering them uninhabitable. Further, each degree of warming is projected to decrease renewable water resources by at least 20 percent for an additional 7 percent of the global population, adding to the risk faced by millions of vulnerable people.⁵ It is evident that climate change impacts, if not effectively managed, may breach ecological tipping points which would then have magnifying effects on interrelated socioeconomic and environmental systems, with a reach far beyond national borders.⁶

At the same time, the economic damage caused by disasters has grown. The financial impact on cities in the region will be significant. According to recent data, costs from major flood events will likely be counted in the billions of dollars with potential serious

¹ ESCAP, *Building Resilience to Natural Disasters and Major Economic Crises* (Bangkok, United Nations, 2012) ² Ibid.

³ Ibid.

⁴ ADB, Green Urbanization in Asia: Key indicators for Asia and the Pacific 2012, (Metro Manila, 2012)

⁵ IPCC, Summary for policymakers, in Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the

Intergovernmental Panel on Climate Change. Field, C.B. and others, eds. (Cambridge, United Kingdom and New York, Cambridge University Press, pp. 1-32).

⁶ IPCC, Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, in *A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change*, Field, C.B. and others, eds. (Cambridge and New York: Cambridge University Press, 2012), p.582.

impacts on national GDP⁷ as well as on the lives of poorer and marginalized communities, in particular.

Despite the extensive socio-economic impacts of climate change in the region, Asia and Pacific countries are increasingly responsible for rising levels of greenhouse gas emissions. While per capita emissions are still low in most countries, the economic and population growth in major Asian economies has led to an increasing need and demand for energy, especially from currently cheap and readily available fossil fuels. Estimates suggest that the Asia-Pacific, with a 6% annual growth rate, has the potential to produce 44% of global GDP by 2035.8 In this "Asian Century" scenario, the region's share of world energy consumption will rise rapidly from around 33% in 2010 (one third of world consumption), to up to 56% by 2035.⁹ In 2035, China and India alone will account for 70% of total electricity generated. Demand for coal in Asia and the Pacific is projected to increase by 52.8% from 2010 to 2035, reaching 3,516.3 million tons of oil equivalents (Mtoe).¹⁰As demand for coal, oil and other resources increases rapidly, CO2 emissions are projected to increase from 13,404 million tons of CO2 in 2010 to 22,112.6 million tons of CO2 in 2035, growing at an annual rate of 2.0%, under business as usual scenarios.¹¹

The region's prospect for pursuing higher, inclusive and sustained growth, as well as reducing poverty and addressing inequalities, will critically depend on its capacity to transform its development patterns to those that are low-carbon, resource efficient, and that sustainably manage natural resources while delivering on inclusive growth necessary for poverty eradication. The World Economic Forum warned that "unless we break the present link between growth and consumption of resources, some USD 2 trillion of global economic output ... will be lost by 2030.¹² As rising and increasingly volatile commodity prices are becoming the "new normal"¹³, the region cannot sustain its resource intensive growth pattern that currently uses three times more resources than world average per unit of GDP.¹⁴

Given the risks posed by climate change, and the sustainable development priorities in the region, the imperative for the region to quickly transform towards low-carbon and green economic development models is clear. However, one of the key challenges in undertaking this transformation is availability and access to climate finance. A report from the UNFCCC estimates that additional investments and financial flows needed in order to address climate change in 2030 would amount to 0.3 - 0.5% of global GDP and 1.1 - 1.7% of global investment.¹⁵ It is estimated that the energy sector alone will

⁷ World Bank, Climate risks and adaptation in Asian coastal megacities: A synthesis report (Washington D.C., 2010)

⁸ ADB, Asian Development Outlook 2013 Highlights. Available from

www.adb.org/sites/default/files/publication/30205/ado2013-highlights_0.pdf 9 Ibid.

¹⁰ Ibid.

¹¹ ADB, Energy Outlook for Asia and the Pacific 2013. Available from www.adb.org/publications/energy-outlook-asiaand-pacific-2013 ¹² World Economic Forum, More with Less: Scaling Sustainable Consumption and Resource Efficiency (Geneva,

^{2012).}

¹³ ESCAP, *Economic and Social Survey*: forward-looking macroeconomic policies for inclusive and sustainable development (Bangkok, 2013). Available from www.unescap.org/sites/default/files/Economic-and-Social-Surveyof-Asia-and-the-Pacific-2013 1.pdf.

¹⁴ ESCAP, Low Carbon Green \hat{G} rowth Roadmap for Asia and the Pacific -Turning resource constraints and the climate crisis into economic growth opportunities (Bangkok, ESCAP, 2012).

¹⁵ UNFCCC, "Investment and financial flows to address climate change: an update", 26 November 2008.

require new investments of about USD 19.9 trillion under an alternative approach to business-as-usual scenarios.¹⁶

The complexity of the current global landscape of climate finance (see Figure 1) poses serious challenges to both policymakers and potential investors. There remain significant knowledge and data gaps that complicate our understanding of the issue and hinder our ability to adequately address investments in climate change-related activities. Furthermore, "the cumulative gap between the level of finance needed and finance actually delivered is growing".¹⁷ As for the current gap at the Asia-Pacific regional level, it points to the challenge of finding ways to effectively and equitably allocate the resources raised, both between and within countries.¹⁸

Filling the "climate financing gap" not only requires identifying alternative and innovative sources of funds from both the public and private sectors, but also developing the appropriate institutional and policy landscape to redirect existing financial flows towards climate mitigation and adaptation activities that also deliver on sustainable development priorities. Financial flows can be effectively mobilized through a combination of public policies and private investments, backed by new and pioneering financing mechanisms.¹⁹ The Fifth Assessment Report of the IPCC emphasized the need for transformations in economic, social, technological, and political decisions and actions to enable climate-resilient pathways for sustainable development. The report made reference to, among others, a range of policy options for enhancing resource efficiency, with highlight on potential co-benefits and synergies among adaptation, mitigation, and sustainable development.²⁰

In Asia and the Pacific, the transition from a focus on quantity of growth, to a focus on the quality of growth – including redirecting investments to support the natural and human capital base of the economy - has been recognized by a number of forums, including at the fifth and sixth Ministerial Conference on Environment and Development in Asia and the Pacific, where member States identified low-carbon green growth as one of the key strategies to pursue sustainable development.²¹ Low carbon development strategies recalibrate the economy to synergise economic growth and environmental protection for a better alignment with sustainable development objectives. Such strategies can help build a climate friendly economy characterized by substantially increased investments in natural capital, while reducing ecological scarcities and environmental risks – and includes activities such as renewable energy, low carbon transport, energy and water-efficient buildings, sustainable agriculture and forest management and sustainable fisheries. Low carbon development strategies must have at their foundation equitable and inclusive social development priorities.

Available from www.unfccc.int/resource/docs/2008/tp/07.pdf.

¹⁶ ADB, Asian Development Outlook 2013. Highlights.

¹⁷ Barbara Buchner and others, *The Global Landscape of Climate Finance* (Climate Policy Initiative, 2014, p. 5). ¹⁸ Barnard and others, *Climate Finance Regional Briefing: Asia and the Pacific* (ODI & HBF, 2014).

¹⁹ Haites, *Aligning Climate Finance and Development Finance for Asia and the Pacific: Potential and Prospects,* ADB Sustainable Development Working Paper Series No. 33 (2014).

²⁰ IPCC, Summary for policymakers, in Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the

Intergovernmental Panel on Climate Change. Field, C.B. and others, eds. (Cambridge, United Kingdom and New York, Cambridge University Press, 2014, pp. 1-32).

²¹ E/ESCAP/MCED(6)/14. *Report of the Sixth Ministerial Conference on Environment and Development in Asia and the Pacific. 2011* Available from <u>www.unescap.org/sites/default/files/MCED6_14E.pdf</u>.

Figure 1. The complexity of the current global landscape of climate finance



Source: Climate Funds Update. Available from <u>www.climatefundsupdate.org/about-climate-fund/global-finance-architecture</u>.

Overview of the paper

Chapter two briefly touches on the evolution of the climate finance landscape, and outlines the current state of play of global sources of climate finance. In light of the UN post-2015 agenda, the discussion will cover a variety of international and national actors, including development finance institutions, international climate funds, governments and relevant government agencies. Data regarding global finance flows are mostly drawn from the Climate Policy Initiative (CPI) reports, as they represent the most comprehensive source of such flows to date.

Chapter three focuses on the regional landscape of climate finance in the Asia-Pacific, with particular attention to active climate funds, multilateral development banks, the distribution of climate finance across countries, and national-level initiatives, including both those funded by international and domestic sources of climate finance. Mitigation, adaptation and reduction of emissions from deforestation and degradation plus conservation (REDD+) initiatives across a variety of sectors will be outlined by examining data available through the Climate Funds Update (CFU). However, since most governments have their own climate change plans, different institutional arrangements to coordinate climate change actions, as well as independent mechanisms to fund adaptation and mitigation measures, it is hard to draw general conclusions, and there exists the risk of some double counting.²² The analysis of regional trends undertaken is affected by the lack of coherent data, and thus this paper focuses on selected regional experiences in a variety of sectors, with the aim of shedding light on

²² See for example methodology sections in Buchner and others (2014) and Haites (2014).

relevant programmes across the region.²³ Country-level cases have been chosen with the purpose of highlighting a selection of successful examples of climate finance initiatives.

Finally, **Chapter four** provides recommendations for policymakers on how to effectively address identified challenges and mobilize additional resources for climate finance across the Asia-Pacific region. These include the importance of aligning climate finance and financing for sustainable development including through development of long-term low-carbon sustainable development strategies; mobilizing national public climate finance; incentivising national private sector climate finance flows; and strengthening regional cooperation and leveraging international cooperation frameworks.

2. SETTING THE CONTEXT: THE CURRENT STATE OF CLIMATE FINANCE AT THE GLOBAL LEVEL

2.1. Brief history of the UNFCCC and Climate Finance

The international community ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, to establish a framework to discuss and design actions to limit average global temperature increases and the resulting climate change. Three years later, to strengthen provisions concerning emission reductions in the Convention, the Kyoto Protocol was adopted. The Kyoto Protocol legally binds developed countries to emission reduction targets and is structured in two commitment periods (2008-2012 and 2013-2020). The 195 Parties to the Convention and 192 Parties to the Kyoto Protocol have been meeting regularly at the so called annual Conference of the Parties (COP) and in 2010, agreed to a milestone target: emissions need to be reduced so that global temperature increases are limited to below 2 degrees Celsius. With the close of the first commitment period of the Kyoto Protocol in 2012, the next goal of the UNFCCC COP process is to negotiate a legally-binding global climate agreement on curbing carbon emissions, anticipated to be reached in Paris at COP21 in December 2015, with a binding effect from 2020.

A key issue in the negotiations is how to finance the necessary transformations to limit global warming. A report from the UNFCCC estimates that additional investments and financial flows needed in order to address climate change in 2030 would amount to 0.3 - 0.5% of global GDP and 1.1 - 1.7% of global investment.²⁴ This ambitious target is quite challenging considering the financial constraints that countries, especially developing countries and countries with special needs, are already facing which have been exacerbated by the impacts of the ongoing global economic slowdown.

Article 11 of the UNFCCC, having identified climate finance as a necessary aspect of climate mitigation and adaptation action, established a Financial Mechanism. The Mechanism facilitates provision of financial resources by developed country to

 ²³ The choice of countries and sectors is dictated by the availability of data and existing literature.
 ²⁴ UNFCCC, *Investment and financial flows to address climate change: an update*, Available from www.unfccc.int/resource/docs/2008/tp/07.pdf.

developing country Parties to implement the UNFCCC.²⁵ The whole international community is supposed to take up common but differentiated responsibilities of the financial mechanism. Article 4.7 clearly states 'the extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitment under the Convention related to financial resources and transfer of technology'.²⁶

The Financial Mechanism is accountable to the COP, which decides on its climate change policies, programme priorities and eligibility criteria for funding. The Financial Mechanism is entrusted to the Global Environment Facility (GEF) and, after COP 17, also to the Green Climate Fund (GCF). The former has served since 1991 as a financial mechanism to protect the global environment and promote environmental sustainable development. The latter is in charge of channelling new and additional financial resources to developing countries and catalysing public and private climate finance at both the international and national levels. The GCF is committed to pursue country-driven approaches and promote engagement of relevant domestic institutions and stakeholders by providing simplified and direct access to sources of funding. The Financial Mechanism under the UNFCCC currently disburses under USD 1 billion per year, primarily through four funds: the Special Climate Change Fund (SCCF) and the Least Developed Countries Fund (LDCF), both managed by the GEF; the GCF under the Convention; and the Adaptation Fund (AF) under the Kyoto Protocol.

These institutions only account for a small share of the estimated climate finance needed. Total adaptation and mitigation financial requirements of developing countries could reach the level of USD 1,000 billion in the current status quo. The funding shortfall is evident and it is clear that national public and private financing for climate change is urgently needed to complement the funding volumes provided under the UNFCCC umbrella. The United Nations Climate Summit convened in New York in September 2014 made a key announcement on climate finance, launching an initiative to mobilise more than USD 200 billion in financial resources from both public and private sources by the end of 2015. This includes new pledges for the Green Climate Fund; the decarbonisation of investment portfolios by moving assets out of fossil fuel-based investments; the continued efforts of national banks to invest in new climate activities; and wide support for putting a price on carbon emissions.²⁷ Subsequently, the first biennial High-level Ministerial Dialogue on Climate Finance was held at the COP20 in Lima.²⁸ During the meeting, attention was directed to the need to complement existing market mechanisms with long-term finance in order to reach the goal of mobilising scaled-up climate finance to the GCF of USD 100 billion per year by 2020.²⁹ Further interventions from Ministers showed convergence on key elements to advance ambition on climate finance, including the need for: quantitative finance targets; improvement of existing climate finance instruments and development of new ones to ensure the sustainability of climate finance; coherent and strong information on climate finance

http://unfccc.int/meetings/lima_dec_2014/items/8717.php (accessed 21 April 15).

²⁵ UNFCCC, Climate Finance. Available from

http://unfccc.int/cooperation_and_support/financial_mechanism/items/2807.php (accessed 21 April 15). ²⁶ See http://unfccc.int/essential_background/convention/background/items/1362.php.

 ²⁷ United Nations, Press Release: UN Secretary-General announces new initiatives and partnerships to mobilize climate finance and promote action in cities, forests, farms and industry. Climate Change Summit 2014: Media. Available from <u>www.un.org/climatechange/summit/media</u> (accessed 21 April 15).
 ²⁸ UNFCCC, Ministerial Dialogues, 2014. Available from

²⁹ UNFCCC, Summary - Biennial High Level Ministerial Dialogue on Climate Finance, Tuesday, December 9, 2014 – Lima, Peru. See http://unfccc.int/files/meetings/lima_dec_2014/application/pdf/hlmd_summary.pdf.

necessary to build trust among the parties; and importantly, both public and private investments and a balanced allocation to mitigation and adaptation finance.³⁰

The COP20 in Lima additionally elaborated the elements of an updated climate change agreement, and requested that all Parties submit their intended emissions reductions by October 2015. These Intended Nationally Determined Contributions (INDCs) will form the foundation for climate action post-2020, when the new agreement on climate change is set to come into effect. INDCs will provide information on a country's strategic efforts to combat climate change through actions that are tailored to its own national circumstances. Countries have been asked to identify climate actions that can be undertaken, and those that could be further delivered with financial and other forms of assistance. Development of the INDCs also offers the opportunity to identify cross-sectoral and multiple-benefits from climate mitigation and adaptation actions, especially if considered within the framework of a low-carbon sustainable development framework. Submissions have been requested by October 2015, to feed into the COP21 negotiations in Paris in December 2015.

2.2. Highlights from the Current State of Climate Finance

The Climate Policy Initiative (CPI) has been tracking and consolidating the most comprehensive estimates for climate finance, represented in the Figure 2 below by the now well-known CPI spaghetti diagram. While the spaghetti diagram has its limitations³¹ including data availability of certain climate flows, this report will primarily use the CPI 2014 Climate Policy Landscape to provide an overview of key elements of the current state of global climate finance. This report is not intended to provide a comprehensive overview, but rather to report on key figures to provide a broad view of the current situation.

³⁰ Ibid.

³¹ Barbara Buchner and others. *Global Landscape of Climate Finance 2014* (Climate Policy Initiative, 2014). Available from <u>http://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2014/</u>. Note: The Climate Policy Landscape tracks incremental (including grants) rather than total investment costs, and includes public framework expenditures (for e.g. Capacity building; Strategies and plans; MRV systems; Demonstration projects), but excludes policy-induced revenues (for e.g. taxes, feed-in tariffs, subsidies, concessional loans...). Significant data gaps impede a full report of climate flows, including for example private sector investments in energy efficiency, transport, forestry and agriculture, and in adaptation activities as a whole.



Figure 2. CPI Climate Finance Landscape

Source: Barbara Buchner and others, Global Landscape of Climate Finance 2014 (Climate Policy Initiative, 2014). Available from http://climatepolicyinitiative.org/publication/global-landscape-of-climatefinance-2014/.

According to CPI's latest reports, in 2013 annual global climate finance settled at USD 331 billion. Despite still lagging far below the levels needed to limit warming to 2 degree Celsius, climate finance flows have seen a significant decrease when compared to 2012 levels of USD 359 billion. In 2013, Climate finance flows were directed almost equally to developed (OECD) and developing (non-OECD) countries, with each receiving USD 164 billion and USD 165 billion respectively³². North-South flows accounted for USD 34 billion in 2012.³³ Developing countries invested USD 2 billion in developed countries, and USD 10 billion in south-south cooperation.³⁴ However, approximately three fourths of total flows, particularly those from the private sector, were invested in their country of origin.³⁵

PUBLIC AND PRIVATE SECTOR FLOWS

In 2013, the public sector contributed USD 137 billion, a USD 2 billion increase from 2012,³⁶ while the private sector provided USD 193 billion, a drop of USD 31 billion

³² Barbara Buchner and others. Global Landscape of Climate Finance 2014 (Climate Policy Initiative, 2014). Available from http://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance- $\frac{2014/}{^{33}}$ Ibid.

³⁴ Ibid.

³⁵ Ibid. Note: It is important to note that data limitations restrict the ability to identify private sector flows in developing countries systematically and concretely.

³⁶ Ibid. Note: It is estimated that public actors in emerging and developing economies alone invested USD \$544 billion in 2012 on fossil fuel subsidies alone.

from 2012, as elaborated in Table 1 below.³⁷ It is estimated that three fourths of climate finance flows were invested with the expectation of earning commercial returns.³⁸

Source	Total (\$b)	% change	% total	Mitigation	Adaptation	Mixed (Mitigation/ Adaptation)
Public	\$137	minimal	42%	79%	18%	3%
Private	\$193	-14%	58%	100%	N/A ³⁹	N/A

Table 1: Summary of public and private total finance flows

Source: Based on Barbara Buchner and others. Global Landscape of Climate Finance 2014 (Climate Policy Initiative, 2014). Available from http://climatepolicyinitiative.org/publication/global-landscape-ofclimate-finance-2014/.

With regards to public finance flows, direct foreign investments (DFIs) account for the majority investments by public actors and have contributed USD 126 billion, or 38% of total flows in 2013. Other public actors included multilateral and national climate funds that approved around USD 2.2 billion directed to climate change-related activities, with an increase of almost 40% from 2012. CPI further tracked USD 6-12 billion of direct public contributions from government agencies and ministries in 2013.⁴⁰ However. limited data on domestic public budgets and expenditures for climate change makes it hard to capture the latter trends.

In September 2014, six multilateral development banks reaffirmed their shared commitment to take the lead in further developing climate financing.^{41,42} They pledged to maintain a strong focus on climate change. In particular, this will include leveraging additional private sector investments and continuing to innovate and promote more robust and transparent climate finance tracking and reporting. These six multilateral development banks began to jointly track climate finance flows in 2011 (Table 2) and since then have delivered USD 75 billion in financing assistance to developing countries to support responses to climate change challenges. About 80% (USD 18.9 billion) of this lending has supported mitigation activities, while 20% (USD 4.8 billion) has supported adaptation measures.⁴³ Of the total commitments, 9%, or USD 2.2 billion, came from external resources, such as bilateral or multilateral donors, including the Global Environment Facility and the Climate Investment Funds.

³⁷ Ibid. Note: Private investment figures need be explored critically as drops in private sector investments can be attributed to changing cost structures. For example, investments in solar decreased by USD \$19 billion, however, installed capacity increased by 5 GW, indicating that the investment decrease is largely associated with improving costs necessitating less financial investment. ³⁸ Ibid.

³⁹ Ibid. Note: There is no reliable data source of project level private sector adaptation interventions. ⁴⁰ Ibid.

⁴¹Joint Report on MDB Climate Finance 2013, A report by a group of Multilateral Development Banks (MDBs) comprising the African Development Bank (AfDB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Inter- American Development Bank (IDB), and the International Finance Corporation (IFC) and World Bank (WB) from the World Bank Group (WBG), September 2014. Available from www.eib.org/projects/documents/joint-report-on-mdb-climate-finance-

⁴² ADB, Multilateral Development Banks Agree to Reinforce Climate Financing in Advance of UN Summit. Available from www.adb.org/news/multilateral-development-banks-agree-reinforce-climate-financing-advanceun-summit (accessed 21 April 15). ⁴³ Barbara Buchner and others. *Global Landscape of Climate Finance 2014* (Climate Policy Initiative,

^{2014).} Available from http://climatepolicvinitiative.org/publication/global-landscape-of-climate-finance-2014/.

Multilateral Development Bank	Adaptation 2013	Mitigation 2013
AfDB	473	768
ADB	980	2,272
EBRD	187	3,242
EIB	166	5,058
IDB	121	1,097
IFC	8	2,662
WB	2,927	3,830
Total	4,826	18,928

Table 2. Multilateral development banks climate finance commitments to adaptation

Source: UNFCCC Standing Committee on Finance 2014 Biennial Assessment and Overview of Climate Finance Flows Report. Available from

http://unfccc.int/files/cooperation_and_support/financial_mechanism/standing_committee/application/pdf/ 2014_biennial_assessment_and_overview_of_climate_finance_flows_report_web.pdf.

The GEF Trust Fund is the primary source of grants provided to developing countries through the Financial Mechanism. During this GEF 5 (2010-2014) cycle, GEF had funded 787 projects on climate change mitigation for a total volume of USD 4.5 billion. Funding in support to adaptation at the GEF is now delivered directly through the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF). As at 30 June 2014, about USD 1.3 billion overall has been programmed by the GEF for adaptation. The contributions from donor countries for the LDCF and SCCF are voluntary and have experienced a substantial increase during the past years. Cumulative pledges to the LDCF reached USD 900 million and USD 344 million for the SCCF in 2014.

On the other hand, private sector investments account for the majority of climate finance, despite a decrease from 2012 to 2013 levels, further highlighted in Table 3. It is estimated that private climate finance flows to developing countries is between USD 27 and 123 billion, based on 2008 to 2011 data from a variety of sources - with the caveat that private climate finance flows to developing countries are not systematically tracked, so their magnitude is highly uncertain.⁴⁴ In 2013, 'project developers'⁴⁵ invested the most, with a contribution of USD 88 billion. Corporate actors invested USD 47 billion of total private finance, while households (including family-level economic entities, high net worth individuals and their intermediaries) invested USD 34 billion. Commercial financial institutions contributed USD 21 billion (11% of private investments). Private equity, venture capital, and infrastructure funds intermediated USD 1.6 billion. Institutional investors spent around USD 1.5 billion on renewable energy plants. The majority of these sources are being provided through a variety of instruments, namely grants, low-cost debts (including concessional loans), and capital instruments at commercial terms (such as project-level market rate debt, project-level equity, and balance sheet financing), as elaborated in Table 4.46

⁴⁴ UNFCCC, Standing Committee on Finance 2014 Biennial Assessment and Overview of Climate Finance Flows Report. Available from

http://unfccc.int/files/cooperation_and_support/financial_mechanism/standing_committee/application/pdf/2014_bi ennial_assessment_and_overview_of_climate_finance_flows_report_web.pdf

⁴⁵ Barbara Buchner and others. *Global Landscape of Climate Finance 2014* (Climate Policy Initiative, 2014). Available from http://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-

<u>2014/</u>. Note: defined as "established national/regional energy utilities, independent power producers, and other project developers specializing in renewable energy, including state-owned enterprises". p. 10.

⁴⁶ Ibid.

Public actors:	Total	%	Private actors:	Total	%
	(\$b)	share		(\$b)	share
Governments and	\$9	6.5%	Project developers	\$88	55%
Government					
agencies					
National and	\$2.2	1.6%	Corporate actors	\$47	24%
multilateral	billion		& manufacturers		
climate funds					
DFI	\$126	91%	Households	\$34	18%
National DFIs	\$69	55%	Commercial	\$21	11%
			financial		
			institutions		
Multilateral	\$43	34%	Private equity,	\$1.6	1%
	,		venture capital.	-	
			infrastructure		
			funds		
Bilateral	\$14	11%	Bilateral	\$1.5	<1%
Total	~\$137.2	11/0	Total	\$193	1,0
1 0141	hillion		1 0141	ΨΙ/Ο	

Table 3. Breakdown of investments by type of public and private actor

Source: Based on Barbara Buchner and others. *Global Landscape of Climate Finance 2014* (Climate Policy Initiative, 2014). Available from <u>http://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2014/</u>.

Instruments	Total (\$b)	% share of total climate
		finance
Grants	\$11	3%
Low-cost debt ⁴⁷	\$74	22%
Balance sheet financing	\$158	48%
Project level market rate	\$71	22%
debt		
Project level equity	\$16	5%
Total	\$330	100%

 Table 4. Climate finance flows by instruments

Source: Based on Barbara Buchner and others. *Global Landscape of Climate Finance 2014* (Climate Policy Initiative, 2014). Available from <u>http://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2014/</u>.

MITIGATION AND ADAPTATION FLOWS

Compared to 2012, mitigation finance has decreased by USD 35 billion, totalling USD 302 billion, and still accounting for 91% of total investments; adaptation finance has instead increased by about 25%, totalling USD 27 billion.⁴⁸ Given that more than 40% of GHG emissions are caused by energy production and use, the majority of mitigation

⁴⁷ Ibid. Note: 98% of all low cost debt originated from DFIs.

⁴⁸ Barbara Buchner and others. *Global Landscape of Climate Finance 2013 and 2014* (Climate Policy Initiative). Note: Adaptation finance recorded is only from public sources, as there is no reliable data source for project-level private adaptation interventions, and Buchner and others, 2014 also do not take into account data on domestic public budgets.

finance projects are aimed at promoting renewable energy sources.⁴⁹ Approximately 71% of mitigation flows targeted renewable energy investments, while energy efficiency investments are roughly estimated at 9% (based only on public sector investments). The remainder of mitigation flows were directed towards sustainable transport, emissions reductions from industry sectors, and agriculture, forestry, land use, and livestock management.⁵⁰ Current levels of funding are however deemed to be insufficient to enhance mitigation measures and the CPI envisions that mitigation measures will require between USD 200 - 210 billion per annum in 2030.⁵¹

About 88% of adaptation funding came from DFIs, 2% from funds, and the remainder from government bodies beyond DFIs (9%).⁵² Table 5 depicts the most active funds in delivering climate adaptation finance. However, these contributions remain low and adaptation unfortunately remains underfunded at the global level. ⁵³ Additional investments needed are estimated to amount to several billion dollars, with at least an additional USD 28 – USD 67 billion of estimated required flows to developing countries.⁵⁴

Adaptation Finance from 'Funds'	Pledge	Deposit	Approval	Disbursement
Adaptation Fund (AF)	323.05	186.48	166.36	29.14
Least Developed Countries Fund	536.65	435.46	286.73	126.63
(LDCF)				
Special Climate Change Fund	241.61	196.4	147.25	100.23
(SCCF)				
Pilot Programme for Climate	1119	804.8	317.48	8
Resilience (PPCR)				
Global Climate Change Alliance	385.36	365.36	296.81	130.99
(GCCA)				

Table 5. Finance from Funds that primarily support adaptation, in millions of dollars

Source: Based on Climate Funds Update, 2012. "Climate Finance Thematic Briefing: Adaptation Finance". Available from <u>www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/7910.pdf</u>.

To this end, the GCF has recently committed to devote 50% of its funding to adaptation measures, starting from 2015, with half of it going to Small Island Developing States (SIDS), LDCs and African states, to help address the problem of insufficient funding for adaptation. In addition to mitigation and adaptation finance, since 2008, USD 2.81 billion has been pledged to five multilateral climate funds in order to support REDD+.⁵⁵ However, the future of these mechanisms still remains

⁴⁹ Barnard and others, *Climate Finance Thematic Briefing: Mitigation Finance*, Climate Finance Fundamentals. (ODI & HBF: 2014)

⁵⁰ Barbara Buchner and others. *Global Landscape of Climate Finance 2013 and 2014* (Climate Policy Initiative). Note: Adaptation finance recorded is only from public sources, as there is no reliable data source for project-level private adaptation interventions, and Buchner and others, 2014 also do not take into account data on domestic public budgets. ⁵¹ Barbara Buchner and others. *Global Landscape of Climate Finance 2013* (Climate Policy Initiative). Figures

⁵¹ Barbara Buchner and others. *Global Landscape of Climate Finance 2013* (Climate Policy Initiative). Figures must be seen as indicative only.

⁵² Barbara Buchner and others. *Global Landscape of Climate Finance 2014* (Climate Policy Initiative, 2014).

⁵³ Caravani and others, *Climate Finance Thematic Briefing: Adaptation Finance*. Climate Finance Fundamentals (ODI & HBF, 2014).

³⁴ Barbara Buchner and others. *Global Landscape of Climate Finance 2013* (Climate Policy Initiative).

⁵⁵ REDD-plus activities are located in developing countries and are funded by a combination of domestic and developed country finance.

highly uncertain. Encouragingly, pledges were made at the UN Climate Summit in 2014 for additional REDD+ finance and as of now 80% of the total funding pledged has been deposited.

Climate funds such as the GEF, LDCF and the SCCF, as well as the World Bank's Climate Investment Funds (CIFs)⁵⁶ on the one hand were successfully able to spend money for climate finance by promoting projects that have the potential to reduce emissions and increase resilience to climate change. Thus, for example, mitigation finance has targeted middle-income countries where emissions are already high and even growing; poor and vulnerable countries have also been specifically targeted by climate funds, particularly by supporting responsible ministries in investment planning and financial-management decisions. On the other hand, however, these funds have not always been successful, mostly because some programmes were not carefully designed to target national circumstances. Therefore, it is clear that "a focus on the underlying policy, regulatory and enabling environment in developing interventions is needed alongside efforts to make large investments".⁵⁷

⁵⁶ The Climate Investment Funds (CIF) include four key programmes that held 63 developing countries pilot lowemissions and climate resilient development including the \$5.3 billion Clean Technology Fund (CTF), the \$1.2 billion Pilot Program Climate Resilience (PPCR), the \$785 million Forest Investment Program (FIP) and the \$796 million Scaling Up Renewable Energy Program (SREP). <u>Available from www.climateinvestmentfunds.org/cif/</u>. ⁵⁷ Nakhooda, S., M. Norman and others, *Climate Finance: is it making a difference? A review of the effectiveness*

of Multilateral Climate Funds. ODI Report 2014, p. 72

3. THE STATE OF CLIMATE FINANCE IN THE ASIA-PACIFIC

The figures presented below aim to shed some light on key actors within the region and their climate finance flows. Obtaining a comprehensive picture of the state of climate finance in the Asia-Pacific is complicated by the fact that most governments have a climate change plan as well as different institutional arrangements to coordinate climate change actions.⁵⁸ Almost every developing country in the region has its own climate change plan, and most have a National Adaptation Plan of Action (NAPA), as most funds, such as the LDCF and the CIFs, require those as a precondition for future funding. Some countries also have independent mechanisms to fund adaptation and mitigation measures. In addition, private climate finance flows to developing countries are not systematically tracked, so their magnitude is highly uncertain.⁵⁹ Furthermore, some countries devote significant domestic resources to climate change, while others rely almost entirely on bilateral and multilateral finance.⁶⁰ The landscape presented below seeks to highlight some of the key flows that have been tracked in the region to date, as well as key country level initiatives to mobilize climate finance.

3.1. **Finance flows from International Climate Funds**



Figure 3. Top 10 recipient countries in the Asia-Pacific

Source: Based on Climate Funds Update (see http://www.climatefundsupdate.org/regions/asia-pacific (accessed March 2015)

http://unfccc.int/files/cooperation and support/financial mechanism/standing committee/application/pdf/2014 bi ennial_assessment_and_overview_of_climate_finance_flows_report_web.pdf.

⁵⁸ Haites, Aligning Climate Finance and Development Finance for Asia and the Pacific: Potential and Prospects, ADB Sustainable Development Working Paper Series No. 33 (2014).

⁵⁹ UNFCCC, Standing Committee on Finance 2014 Biennial Assessment and Overview of Climate Finance Flows Report. Available from

Currently, 22 climate funds and initiatives are active in the region, which have approved a total of USD 3.35 billion for projects, with USD 1.25 billion approved for new projects in 2013 alone.⁶¹ Despite concerted efforts from such a variety of funds and initiatives, the distribution of climate finance flows within the region has been uneven. Over two thirds of the climate finance directed to Asia Pacific since 2003 has supported mitigation initiatives, while the remaining funding supported adaptation activities, REDD+ and multiple foci programs.⁶² The most recent data from the Climate Funds Update (CFU) – an Overseas Development Institute initiative - show that 32 countries⁶³ in the Asia-Pacific have altogether received more than a quarter of total public climate finance from dedicated climate funds. India, Indonesia and China alone have received almost half, approximately 46% of total mitigation and adaptation funding approved by dedicated climate funds for Asia since 2003.



Figure 4. Top active funds by data available for East Asia⁶⁴ and the Pacific, and South Asia⁶⁵

Source: Based on the Climate Funds Update. Available from www.climatefundsupdate.org/regions/asia-pacific.

⁶¹ Barnard and others, *Climate Finance Regional Briefing: Asia and the Pacific.* Climate Finance Fundamentals, (Climate Policy Initiative, 2014).

⁶² Buchner and others, *The Global Landscape of Climate Finance 2013*, Climate Policy Initiative.

⁶³ The CFU here follows the World Bank classification of countries in the East Asia and the Pacific and South-Asia, which includes, respectively: American Samoa, Cambodia, China, Fiji, Indonesia, Kiribati, Democratic Republic of Korea, Lao PDR, Malaysia, Marshall Islands, Micronesia (Fed. Sts.), Mongolia, Myanmar, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Thailand, Timor-Leste, Tuvalu, Tonga, Vanuatu, Vietnam; and Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka.

⁶⁴ Countries considered by the CFU under "East Asia and the Pacific" are: Cambodia; China; Cook Islands; Fiji; Indonesia; Kiribati; Kuwait; Lao PDR; Malaysia; Marshall Islands; Mongolia; Myanmar; Palau; Papua New Guinea; Philippines; Samoa; Solomon Islands; Thailand; Timor Leste; Tonga; Tuvalu; Vanatu; Vietnam. ⁶⁵ Countries considered by the CFU under "South Asia" are: Afchanistan: Bangladesh: Bhutan: India: Maldives:

⁶⁵ Countries considered by the CFU under "South Asia" are: Afghanistan; Bangladesh; Bhutan; India; Maldives; Nepal; Pakistan; Sri Lanka.

The Asia-Pacific received 31.1% of total mitigation funding from climate funds active in the region, with Indonesia being the largest recipient with USD 382.86 million approved for mitigation activities.⁶⁶ India, Indonesia, China, the Philippines and Thailand together received 82%, or USD 1.7 billion, of the total amount approved for mitigation in the region. The Clean Technology Fund, under the World Bank CIFs, has provided the majority, or USD 706 million, of newly approved mitigation finance.

62% of total climate finance from funds approved to the Asia-Pacific since 2003 has supported mitigation activities.⁶⁷ On average most of mitigation finance is being directed towards countries with higher CO2 intensity, larger carbon sinks, lower per capita GDP and good governance.⁶⁸ While most mitigation funding supports largescale renewable energy, energy efficiency and transport projects, the SREP is supporting decentralised renewable energy and energy access programmes in Nepal, Maldives and Vanuatu for a total approved amount of almost USD 63 million.⁶⁹

The Asia-Pacific region received 28% of total adaptation finance, with approvals slow but accelerating.⁷⁰ The USD 346 million in adaptation finance approved in 2013 only represents 28% of the total increase of financing for the whole region. Since its establishment in 2008, the Clean Technology Fund has allocated USD 6.1 billion for 134 projects and programs, with a total of USD 1.19 billion for twenty projects across the region, mostly through concessional loans.⁷¹ As for adaptation, the largest amounts are being provided by the Pilot Program on Climate Resilience (PPCR)⁷² to support projects in Bangladesh, Cambodia, Nepal, Samoa, Tonga and Papua New Guinea for a total approved amount of USD 290 million. Adaptation finance flows tend to go to more vulnerable countries. However, vulnerability alone does not explain the allocation of these funds. Nonetheless, approved finance for projects in vulnerable countries, particularly the small Pacific Island states, has arguably been modest. The Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Palau, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu altogether receive only 4.6% (USD 155 million) of the total amount approved for the Asia-Pacific, primarily for adaptation activities. The Asia-Pacific only receives 8% of the total amount of REDD+ finance, with Indonesia being the largest recipient in the region, mostly through bilateral relationships with Norway and Australia.⁷³

www.climateinvestmentfunds.org/cif/node/2, More information on the PPCR can be found at

⁶⁶ Barnard and others, Climate Finance Thematic Briefing: Mitigation Finance, Climate Finance Fundamentals, (Climate Policy Initiative, 2014).

Barnard and others, Climate Finance Regional Briefing: Asia and the Pacific, Climate Finance Fundamentals, (Climate Policy Initiative, 2014).

⁶⁸ Haites, Aligning Climate Finance and Development Finance for Asia and the Pacific: Potential and Prospects, ADB Sustainable Development Working Paper Series No. 33 (2014). p. 34

⁶⁹ Barnard and others, Climate Finance Regional Briefing: Asia and the Pacific, Climate Finance Fundamentals, (Climate Policy Initiative, 2014). ⁷⁰ Caravani, A., Barnard, S., Nakhooda, S. (ODI) and Schalatek, L. (HBF) Climate *Finance Thematic Briefing:*

Adaptation Finance, Climate Finance Fundamentals (Climate Policy Initiative, 2014). ⁷¹ Barnard *et al*, (2014) Further information on such projects can also be found at

https://www.climateinvestmentfunds.org/cif/Pilot_Program_for Climate Resilience

⁷³ Norman and others, *Climate Finance Thematic Briefing: REDD+ Finance.* Climate Finance Fundamentals (ODI & HBF, 2014).

Fund	Year of initiation	South Asia - Amount approved (in US million)	East Asia and Pacific Amount approved (in US million)	
	Adaptation Fun	d Board (UNFCC	C Kyoto Protoc	:ol)
Adaptation Fund (AF)		2009	24.1	43.6
	Brazilian Develo	opment Bank		
Amazon Fund		2009	/	53.5
	Indonesia's Nati	ional Developmen	t Planning Ager	ıcy
Indonesia Climate Change T (ICCTF)	rust Fund	2010	/	9.5
	UNDP			
MDG Achievement Fund		2006	5	20
UNREDD Program		2008	6.3	24.4
	World Bank			
Clean Technology Fund (CT	F)	2008	375	888.7
Forest Carbon Partnership Fa	acility (FCPF)	2008	3.6	11.5
Forest Investment Program (FIP)	2009	/	19.3
Scaling-up Renewable Energ Low Income Countries (SRE	gy Program for (P)	2009	66.1	0.6
Pilot Programme for Climate and Resilience (PPCR)		2008	170	168.4
	The Global Env	vironment Facility	(GEF)	
Special Climate Change Fun	d (SCCF)	2001	/	70.1
Least Developed Country Fu	nd (LDCF)	2002	77.6	143.2
Strategic Priority on Adaptat GEF4)	ion (SPA) (from	2004	6.9	3.1
GEF4		2006	137.7	/
Global Environmental Facili	ty (GEF4)		/	297.5
GEF5		2010	90	/
Global Environmental Facili	ty (GEF5)		/	268.6
Global Environmental Facili		/	9.8	
	The European (Commission		
Global Energy Efficiency an Energy Fund (GEEREF)	d Renewable	2006	/	85.3
Global Climate Change Allia	ance (GCCA)	2007	375	84.8
	The Internation	al Fund for Agric	ultural Develop	ment (IFAD)
Adaptation for Smallholder A Programme (ASAP)	Agriculture	2012	30	27

Table 7. Funds Active in East Asia and the Pacific⁷⁴ and in South Asia⁷⁵

Source: Based on the Climate Funds Update. Available from ww.climatefundsupdate.org/regions/asia-pacific.

 ⁷⁴ Countries considered by the CFU under "East Asia and the Pacific" are: Cambodia; China; Cook Islands; Fiji; Indonesia; Kiribati; Kuwait; Lao PDR; Malaysia; Marshall Islands; Mongolia; Myanmar; Palau; Papua New Guinea; Philippines; Samoa; Solomon Islands; Thailand; Timor Leste; Tonga; Tuvalu; Vanatu; Vietnam.
 ⁷⁵ Countries considered by the CFU under "South Asia" are: Afghanistan; Bangladesh; Bhutan; India; Maldives; New Countries Considered by the CFU under "South Asia" are: Afghanistan; Bangladesh; Bhutan; India; Maldives; New Countries Construction (South Asia) (

Nepal; Pakistan; Sri Lanka.

3.2. **Finance from Multilateral Development Banks**

Table 8 provides figures for MDBs climate finance delivered to East Asia and the Pacific, non-EU and Central Asia and South Asia in 2013 (in USD millions).

Region	MDB Resources						External Resources					Total <i>Tota</i>	Total	
	Investments and technical assistance			ents and Pol assistance ba inst		licy- Investments and Policy sed technical - rume assistance based		Policy- based instrume		MDB Climate Finance	MDB Financ e per			
	Pub	olic	Priv	ate	n	ts	Pu	blic	Priv	ate	ins me	tru ents	per region	region
	Μ	Α	Μ	Α	Μ	Α	Μ	Α	Μ	A	Μ	Α		
EA and Pacific	1438	978	798	0	35	35	644	60	276	0	1	0	4,308	19,016
South Asia	1399	847	514	0	50	50	120	110	30	0	1	0	3,120	16,600
Non- EU and CA	2403	214	2218	46	10	0	70	42	105	0	0	0	5,117	224,463
Total													12,545	260,079

Table 8. Climate Finance delivered by MDBs to East Asia and the Pacific⁷⁶

Source: Adapted from Joint Report on MDB Climate Finance 2013 Available from www.eib.org/attachments/documents/joint report on mdb climate finance 2013.pdf. *Note:* South Asia⁷⁷, and Non-EU and Central Asian Countries⁷⁸. * M = Mitigation, A= Adaptation.

On the one hand, of the total adaptation finance provided by MDBs in 2013, East Asia and the Pacific received USD 1,072 million, while South Asia received USD 1,008 million. On the other hand, of the total MDBs mitigation finance in 2013, USD 3.236 was disbursed to East Asia and the Pacific, and USD 2,113 to South Asia.⁷⁹ Among MDBs, the ADB is the Asian regional development bank, and it is supporting climate change mitigation and adaptation initiatives throughout the region through a variety of initiatives, including: the ADB internal Climate Change Fund; trust funds managed by the ADB which receive contributions from developed countries (Australia, Canada, Japan, Norway, Spain, Sweden, the United Kingdom) and the Global Carbon Capture

In the report, countries considered as part of South Asia include: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. available at

www.eib.org/attachments/documents/joint_report_on_mdb_climate_finance_2013.pdf. Joint Report on MDB Climate Finance (2013) available at: www.eib.org/attachments/documents/joint report on mdb climate finance 2013.pdf.

⁷⁶ In the report, countries considered as part of East Asia and the Pacific are: Cambodia, People's Republic of China, Cook Islands, Fiji, Indonesia, Kiribati, Lao People's Democratic Republic, Malaysia, Marshall Islands, Micronesia, Mongolia, Myanmar, Nauru, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu, Viet Nam. available at www.eib.org/attachments/documents/joint_report_on_mdb_climate_finance_2013.pdf.

www.eib.org/attachments/documents/joint_report_on_mdb_climate_finance_2013.pdf. ⁷⁸ In the report, countries considered as part of Non-EU and Central Asia Countries include: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Kosovo, Montenegro, Republic of Moldova, Russian Federation, Serbia, The Former Yugoslav Republic of Macedonia, Turkey, Tajikistan, Turkmenistan, Ukraine and Uzbekistan, available at

and Storage Institute; and climate funds that are externally managed but can be accessed by the ADB. As of the end of 2013, the total amount of externally managed climate funds that the ADB has managed and accessed is worth USD 1.5 billion.⁸⁰

3.3. Subregional Climate Finance Initiatives

Subregional organizations are increasingly leveraging the benefits of cooperation to address the large gaps in finance and action in the region on mitigation and adaptation. By creating the subregional frameworks for action on climate change, subregional bodies are setting the stage for concerted action at the national level towards climate change mitigation and adaptation. Subregional frameworks also offer a key opportunity to facilitate partnership building and engagement on strengthening the science-policy interface through scientific partnership, capacity building, information and even technology exchange among subregional partners. With support from subregional and regional partners, comprehensive, multi-sectoral and strategic roadmaps for action can be developed and jointly implemented. With these strong policy signals from the subregion, climate finance can be directed to appropriate investments for low carbon development. And, importantly, subregional consensus can ensure that important issues of concern are raised effectively at the global negotiations. In addition, G20 leaders are also in the position of making a significant contribution to climate change finance, thanks to their influential position by engaging in a meaningful discussion on climate change in preparation for the COP21 in Paris, and, by advancing the debate on climate finance, particularly addressing the questions of where will the money come from and where it will be spent.⁸¹ In another forum, G7 leaders committed, from their side, to take concrete action to address climate change by pursuing low-carbon economies and taking the lead in collecting resources to meet the target of mobilising USD 100 billion per year by 2020.⁸²

The below table provides some examples of initiatives that are framing subregional climate finance and action in the Asia-Pacific.

ASEAN ASEAN has been active in addressing climate change, including issuing Declarations/Statements related to climate change in 2007, 2009, 2010, 2011 and 2014 that express the subregion's common understanding and aspirations towards climate change and their resolve to achieve an ASEAN community resilient to climate change through national and regional actions, including by technology transfer, capacity building and financial assistance from developed countries to developing countries to support Nationally Appropriate Mitigation Actions (NAMAs) and Intended Nationally Determined Contributions (INDCs). The statements highlight the importance of climate change mitigation and adaptation

⁸⁰ Haites, *Aligning Climate Finance and Development Finance for Asia and the Pacific: Potential and Prospects,* ADB Sustainable Development Working Paper Series No. 33 (2014). p. 34

⁸¹ Jorgensen, *The G20, climate financing and the UNFCCC COP21 meeting in Paris* (Lowy Institute for International Policy, 2013).

⁸² *The Brussels G7 Summit Declaration*, Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, June 2014; see <u>www.bmub.bund.de/en/topics/europe-international/international-environmental-policy/g7g8-and-g20/g7g8-summit/</u>.

	actions that are consistent with broader sustainable development goals.
	The ASEAN Socio-Cultural Community (ASCC) Blueprint 2009-2015 strategic objectives are to "enhance regional and international cooperation to address the issue of climate change and its impacts on socio-economic development, health and the environment, in ASEAN Member States through implementation of mitigation and adaptation measures". The ASEAN Multi-Sectoral Framework on Climate Change: Agriculture, Fisheries and Forestry towards Food Security (AFCC) was endorsed by the ASEAN Ministers on Agriculture and Forestry (AMAF) in November 2009. The overall aim of the AFCC is to contribute to food security through sustainable, efficient and effective use of land, forest, water and aquatic resources by minimizing the risks and impacts of and the contributions to climate change.
	An ASEAN Working Group on Climate Change (AWGCC) was established in 2009 and the Action Plan on Joint Response to Climate Change was developed in 2012.
	 Key actions include: ✓ Encourage an ASEAN common understanding to engage in joint efforts; ✓ Develop an ASEAN Climate Change Initiative (ACCI); ✓ Facilitate information/knowledge exchange including transfer of technology; ✓ Engage with the international community;
	 ✓ Develop regional strategies to enhance capacity for low carbon economies; ✓ Enhance collaboration to address climate related hazards; ✓ Develop observation systems and conducting policy and scientific studies; ✓ Promote public awareness and advocacy for increased stakeholder engagement; and ✓ Promote win-win synergy between climate change and economic development.
	Source: http://environment.asean.org/asean-working-group-on-climate-change/ http://www.asean-cn.org/Item/981.aspx http://environment.asean.org/wp-content/uploads/2015/03/ASEAN-Joint- Statement-on-Climate-Change-2014.pdf
SAARC	SAARC members, since 1987, have reiterated the need to strengthen and intensify regional cooperation to address the challenges posed by climate change and natural disasters. A number of important initiatives have been launched to direct subregional cooperation efforts on climate change and environmental management, and to link subregional efforts to international commitments including, <i>inter alia</i> :
	✓ Disaster Management in South Asia [•] A Comprehensive

	Decional Framework for Action 2006 2015 more to the Male
	Regional Framework for Action 2006-2015, pursuant to the Male Declaration and aligned to the Hyogo Framework of Actions (2005 – 2015). Member States are preparing respective National Plans of Action for implementation of the Regional Framework and thereafter, an Expert Group Meeting will harmonize the national reports and articulate a Regional Plan of Action.
	✓ Dhaka Declaration and SAARC Action Plan on Climate Change (2008) requires Member States to undertake activities to promote advocacy and awareness raising; cooperation in capacity building; exchange of information of best practices; enhancing south-south cooperation on technology development and transfer; and initiating programmes for adaptation.
	✓ The SAARC Action Plan on Climate Change (2009-2011) identifies seven thematic areas of cooperation covering adaptation; mitigation; technology transfer; finance and investment; education and awareness; management of impacts and risks; and capacity building for international negotiations.
	\checkmark Thimphu Statement on Climate Change (2010) outlines a number of important initiatives at the national and regional levels to strengthen and intensity regional cooperation to address the adverse effects of climate change in a focused manner.
	Source: <u>http://saarc-sec.org/areaofcooperation/cat-detail.php?cat_id=54</u>
PIFS and SPREP	The work of the Pacific Island Forum Secretariat (PIFS) has largely focused on enhancing access to and management of international climate resources. In 2005 the Pacific Forum Islands Leaders endorsed the Pacific Islands Framework for Action on Climate Change 2006-2015 (PIFACC) with the goal of ensuring that Pacific Island peoples and communities build their capacities to be resilient to the risks and impacts of climate change. The mid-term review reaffirmed the need for a regional climate change policy framework.
	The Secretariat of the Pacific Regional Environment Programme (SPREP) supports members in planning and implementing national adaptation strategies (pilot projects included), and integrating climate change considerations into national planning and development processes. SPREP also takes the lead in coordinating regional climate change policies and programmes and developing partnerships for implementing adaptation and mitigation.
	Initiatives include, inter alia:
	✓ The Pacific Climate Change Finance Assessment Framework (PCCFAF) assesses a country's ability to access and manage climate change resources against six interrelated dimensions: (i) Funding sources; (ii) Policies and plans; (iii) Institutions; (iv) Public financial

management and expenditure; (v) Human capacity; and (vi) Development effectiveness. \checkmark The Regional Technical Support Mechanism (RTSM) supports capacity building and technical assistance by maintaining a 'roster of experts' to draw upon for mobilization of technical assistance to country requests on climate change. \checkmark SPREP Pacific Climate Change Roundtable (PCCR) is a biannual meeting to share ideas on climate change and to ensure coordination in support of Pacific Island Countries and Territories (PICTs) efforts on climate change. Source: http://www.forumsec.org/pages.cfm/strategic-partnerships-coordination/climatechange/?printerfriendlv=true http://www.pacificclimatechange.net/index.php/component/content/article/400announcements/7529-call-rtsm http://www.sprep.org/attachments/Publications/PIFACC-ref.pdf.

3.4. National Climate Finance Flows

The local dimension of climate finance is of great importance, not only because of the intrinsically local nature of climate change effects, but also because of the crucial role of local policymakers and practitioners in achieving results on the ground. Country Systems have been devised during the "Global Forum on Using Country Systems to Manage Climate Change Finance", held in Korea in 2013, as a way to manage climate finance at the national level.⁸³ They combine a variety of instruments to address climate finance, including: national and local systems for planning; policy coordination and implementation; budgeting and financial management; procurement and monitoring and evaluation. In this regard, country systems may prove to be essential resources for national governments to manage climate finance at the local level while actively engaging the private sector, NGOs and households. Below, some of the mechanisms to facilitate national climate finance flows are presented.

3.5. Climate Public Expenditure and Institutional Reviews (CPEIRs)

Given the importance of mobilising domestic resources according to national circumstance, climate finance needs to be defined according to country-led definitions of climate expenditures. Therefore, countries in the Asia-Pacific region have started to produce their own Climate Public Expenditure and Institutional Reviews (CPEIRs), aimed at helping Ministries of finance, environment and planning assess how to configure national budgets in order to respond to climate change. Below are examples of five pilot CPEIRs, which altogether signal that awareness has been effectively raised across the region and that climate finance is being brought into national agendas as a key

⁸³ Global Forum Summary, Using Country Systems to Manage Climate Change Finance (Korea, 2013).

issue to be addressed in both the short and the long term.

Bangladesh	The Bangladesh CPEIR reviewed and assessed policy, institutional and financial management arrangements for climate change-related activities of relevant government agencies for the most part, but also included the private sector, non-governmental organisations and households. The report represents the first systematic attempt to identify the scale of ongoing financial commitments to climate change actions throughout the country in the last few years.
	The report found that the government is the largest funder of climate activities, with around three quarters of its expenditure stemming from domestic sources. The findings highlight that the government spends between 6–7% of its annual combined development and non-development budget on climate change-related activities, or around USD 1 billion per year, which represents around 1% of the country's annual GDP. The climate sensitive budget has increased by 22% in absolute terms from the period 2009 – 2010 to 2011 – 2012, with domestic sources accounting for 77% and foreign donor sources for 23% of the total. As of yet, however, Bangladesh still lacks a comprehensive assessment of its needs in terms of climate finance, which is the next step towards the development of a Climate Fiscal Framework.
	There are a number of different government Ministries involved in climate change activities, with at least 37 of them having their own climate sensitive programme, which creates a real challenge in terms of coordination and coherence. In addition to the government, the private sector and local NGOs are also involved in similar activities.
	The CPEIR thus highlighted a series of key issues that policymakers need to tackle in the near future if they want to achieve effectiveness in leveraging climate finance. First, the complex constituency of actors involved in the country requires CPEIR to take the lead in organising and rationalising climate responses. Second, there is urgent need for effective coordination among all actors involved and across three areas, namely policy and planning coordination; financial planning and performance coordination; and technical coordination. Third, there is a need for the recognition of clear mandates with regards to each aspect of coordination, as improved communication would only benefit climate sensitive activities. Finally, it is crucial to establish clear arrangements for monitoring, reporting and verification of climate finance under the UNFCCC in order for the government to efficiently track its expenditure and measure impacts and progress, especially through the Medium Term Budget Framework (MTBF), a governmental initiative which is aimed at outlining the responsibilities of different Ministries and

	explaining the means they will adopt in order to achieve their key objectives. ⁸⁴
Cambodia	In 2012, Cambodia carried out the Cambodia CPEIR, which will be later merged with the Cambodia Climate Change Strategic Plan (CCCSP) prepared by the Ministry of Environment, in order to review the expenditures on activities related to climate change. The CPEIR focuses on both domestic and external expenditure covering both recurrent and development expenditure. According to the review, the proportion of public expenditure in climate change-related activities has grown from 14.9% in 2009 to 16.9% in 2011. The total climate expenditure for 2011 amounted to around KHR 7000 billion (equivalent to USD 1.7 billion). The largest share, or 33%, of climate expenditure was used for climate proofing of rural roads. The vast majority of climate expenditure comes from donor countries, with only little stemming from domestic sources (only 10% in 2011). In contrast, domestic financing accounts for 45% of expenditure that is not relevant to climate. The Cambodian government is currently in the process of developing the National Strategic Development Plan (NSDP) from 2014 to 2018, as well as a longer-term vision to 2030, thus trying to steer additional investments to climate expenditure.
	In addition to these efforts, the UNDP and Sweden are currently supporting the trust fund of the Cambodia Climate Change Alliance (CCCA), which mainly aims at strengthening the National Plan and has so far involved expenditure of USD 3.1 million, and has planned USD 5.8 billion for climate expenditure in 2015. ⁸⁵ The analysis suggests that there have been between 450 and 500 programmes directed to climate change-related activities over the last three years. Throughout this period, the proportion of climate relevant public expenditure has averaged 16%. Thus, the question for future is whether the focus of policies should be on improving the quality of this expenditure, rather than the quantity. Recommendations also point to the need for increased engagement and public debate over climate change, as well as a comprehensive climate policy which should guide relevant expenditure across all the key sectors identified by the CPEIR. ⁸⁶
Nepal	Annual expenditure on climate change-related activities amounts to 2% of the country's GDP and around 6% of total government expenditure over the past five years, with three quarters (76%) of this expenditure directed towards adaptation initiatives. 55% of government's funding for climate change expenditure comes from donors, and the trend in climate finance is in fact moving towards increased donor funding. However, a significant amount of Technical Assistance, around USD 13

⁸⁴ General Economics Division Planning Commission of the Ministry of Planning of the People's Republic of Bangladesh, *Bangladesh Climate Public Expenditure and Institutional Review*, May 2012. Available from http://climatefinance-developmenteffectiveness.org/publications ⁸⁵ See www.climatefinance-developmenteffectiveness.org/countries/cambodia ⁸⁶ ODI, UNDP, *Cambodia Climate Public Expenditure and Institutional Review*, prepared by the ODI with the technical support of the UNDP and the CDDE Facility, July 2012.

	million per year, is not budgeted or accounted for through government systems, and this leads to fragmentation and hinders coordination of effective expenditure.
	central government, local government and donors, which makes it challenging to identify the actual amount of climate finance in the country. Hence, the Nepal Climate Public Expenditure and Institutional Review report stresses the need for a single, common definition of climate change-related expenditure in order to achieve a higher level of clarity and effectiveness in directing funds to climate finance interventions. The significant amount of funding coming from external donors also calls for the establishments of a long-term financing framework, as well as the creation of reporting system and expenditure classification among central and local government agencies, as well as donors. ⁸⁷
Samoa	Samoa issued a National Climate Policy (NCP) in 2007, which provided a comprehensive list of needed actions to respond to climate change, including adaptation, mitigation and climate services. However, the NPC did not provide any guidance on how to prioritise and plan additional investments in adaptation and mitigation, which is instead provided by both the National Greenhouse Gas Abatement Strategy (NGHGAS) and National Adaptation Programme of Action (NAPA). Furthermore, a coordinating body is provided by the National Climate Change Country Team (NCCCT), which includes members from both relevant Ministries and NGOs. ⁸⁸
	The CPEIR is particularly crucial in Samoa, as its islands are highly vulnerable to climate change, especially to frequent cyclones, sea level rise and floods. Estimates suggest that over the last five years, the climate relevant spending dropped from 42% of total spending in 2010 – 2011 to 37% in 2011 – 2012. After applying the assessment of percentage relevance, this has grown from 10% in 2007 – 2008 to 16% in both the period 2009 – 2010 and 2010 – 2011; however, it has fallen to 14% in 2012. These levels are considered to be high with respect to other countries in the region and this reflects the importance of climate finance for Samoa. More actions are therefore needed for the country to achieve a first Climate Fiscal Network to provide guidance both to domestic and external funding for adaptation and mitigation measures. ⁸⁹
Thailand	Thailand, as a middle-income country, has the ability to mobilise significant climate finance from both domestic and international, and public and private sources. Nevertheless, in order to maximise the

⁸⁷ Government of Nepal, National Planning Commission, *Nepal Climate Public Expenditure and Institutional Review*, prepared by Government of Nepal, National Planning Commission with technical support from ODI, UNDP, UNEP, CDDE, December 2011. Available from <u>http://climatefinance-</u> developmenteffectiveness.org/publications.
 ⁸⁸ See <u>www.climatefinance-developmenteffectiveness.org/countries/samoa</u>
 ⁹⁹ ODI, *Samoa Climate Public Expenditure and Institutional Review*, prepared by the ODI with the technical support

of the UNDP. 2012.

effectiveness of these resources, a comprehensive cross-government approach that combines the public and private sectors, which has been termed a Climate Fiscal Framework, would be beneficial. Under the Framework, the government has begun works in 2011 through a country Baseline Assessment. Furthermore, in 2012 a national Climate Fiscal Framework Working Committee was established to monitor climate finance works throughout the country. The first CPEIR was completed in 2012 and it reviewed to what extent public climate expenditures are integrated into the national budgetary process. The analysis comprised over 134,000 budget line items and the average climate-related expenditure in the period 2009 – 2011 amount to over USD 1.7 billion per year.

More specific measures with regards to climate finance were also adopted. In 2013, Thailand started to implement the "Strengthening Thailand's Capacity to link Climate Policy and Public Finance" programme for the period 2013 - 2015. The programme aims to provide support in the allocation and use of public climate finances, acknowledging that responsibilities for achieving objectives on climate change cannot be undertaken by one single ministry, but instead need to involve policies, plans and expenditures from central government ministries, sector ministries and local government agencies.⁹⁰

The CPEIR report shows that climate budget represented an average of 2.7% of total government budget, or 52,000 million Baht per year since 2009. The two main Ministries in charge of climate change-related activities are the Ministry of Agriculture and Cooperatives (MoAC) and the Ministry of Natural Resources and Environment (MoNRE), respectively accounting for 55% and 29% of total climate budget. Adaptation is the largest component of climate budget, accounting for 68% of the total, while mitigation activities account for 21% of total climate budget. The report concludes that climate finance should represent a high priority within the context of the two national master plans to achieve a low-carbon society by 2050, and they further suggest immediate measures that need to be carried out by 2015 and medium-term actions to be implemented by 2020.⁹¹

3.6. National Climate Funds

Another effective way to tailor coordination and strengthening national ownership of climate finance that some countries in the region have pursued is through a National Climate Fund (NCF), a mechanism to support countries to direct finance towards climate

⁹⁰ See <u>www.climatefinance-developmenteffectiveness.org/countries/thailand</u>

⁹¹ ODI, UNDP, *Thailand. Climate Public Expenditure and Institutional Review*, prepared by the ODI with the technical support of the UNDP and CDDE, June 2012. Available from <u>http://climatefinance-developmenteffectiveness.org/publications</u>

change programmes.⁹² NCFs can help national governments focus on country-driven climate change priorities based on national realities, by addressing four main goals: collecting and distributing funds to climate change-related activities that target national circumstances; facilitating the blending of public, private, multilateral and bilateral sources of finance; coordinating country-wide climate change programmes; and strengthening national institutions and financial management, for example through the creation of National Implementing Entities (NIEs) to deliver climate change projects. If aligned with existing national institutions and objectives, NCFs have the potential to create an effective system to translate financial opportunities into real achievements. Some examples include:

Indonesia	The Indonesia Climate Change Trust Fund (ICCTF) was set up as part of the government's efforts to improve aid coordination and enhance national ownership of climate finance. ⁹³ The ICCTF, which became operational in 2010, is led and managed by the Government of Indonesia to ensure that international and private sector support are both harmonised and aligned with national development plans, in accordance with the principles of the Jakarta Commitment (2008). The two main objectives of the ICCTF are to achieve the country's goal of a low carbon economy, as well as greater resilience to climate change; and to enable the Government to increase its effectiveness and impact in managing climate change issues. The Government of Indonesia has identified a series of sectors in which investments should be prioritized by the ICCTF. Under mitigation, these include: energy and mining; forestry; road infrastructure; water; waste management; transportation; and industry. Under adaptation, the identified sectors are: agriculture; and coastal area, including small islands, marine life and fisheries. In light of these priorities, the ICCTF focuses on three window priority areas: i) land base mitigation, which aims to contribute to efforts to reduce emissions from deforestation and forest degradation while advancing efforts toward efficient land uses and sustainable forest resources management, ii) energy, as the ICCTF intends to prepare the country's national and local institutions, as well as vulnerable communities, for current and possible future impacts of climate change. ⁹⁴ Total resources allocated to the ICCTF amount to around USD 11.3 million. ⁹⁵
Bangladesh	The government established a Climate Change Resilience Fund (BCCRF) in 2010 and linked it to the country's Climate Change Strategy and Action Plan (BCCSAP) for the period 2009 – 2018. Its

⁹² Flynn, C., Blending Climate Finance through National Climate Funds: A guidebook for the design and establishment of national funds to achieve climate change priorities, UNDP (New York, 2011).

⁹³ Ibid.

⁹⁴ See <u>www.icctf.or.id</u>.

⁹⁵ As of 2012, ICCTF is being funded by: DFID (\$9.5 million); AusAID (\$1.4); SIDA (\$332,000) and UNDP (\$88,000). Exact breakdowns can be found at <u>www.icctf.or.id/finance-and-performance/read/29/funding-status-2012</u>.

	main objective is to provide support to vulnerable communities in adapting to climate change effects. ⁹⁶ Resources allocated to the BCCRF total USD 188.2 million. ⁹⁷ The BCCRF finances activities designed to achieve one or more of the BCCSAP's six main pillars: food security, social protection and health; comprehensive disaster management; infrastructure; research and knowledge management; mitigation and low carbon development; capacity building and institutional strengthening. ⁹⁸
China	In 2007, the Chinese Ministry of Finance and the National Development and Reform Commission (NDRC) established the China Clean Development Mechanism (CDM) Fund in order to support the National Climate Change Programme and channel resources to activities that address climate change and promote socio-economic sustainable development. ⁹⁹ As of 2012, the China CDM Fund has a capital size of around USD 1.58 billion. ¹⁰⁰ China CDM Fund efforts are channeled through two main business activities: grants, on the one hand, and investment on the other hand, concessional loans, equity investment and innovative financing model, which support industrial activities that generate actual emission reduction effects mostly covering renewable energy, energy conservation, energy efficiency, new energy equipment and material manufacturing. Another major business activity of the China CDM Fund is cooperation with both international institutions, such as the World Bank and the ADB, and domestic commercial banks and local governments. ¹⁰¹

3.7. Nationally Appropriate Mitigation Actions (NAMAs) and Intended **Nationally Determined Contributions (INDCs)**

There has been increasing interest in Nationally Appropriate Mitigation Actions (NAMAs) as a tool for countries to promote climate change mitigation actions in the context of national sustainable development strategies. The concept of NAMA was introduced in the Bali Action Plan at the UNFCCC Conference of Parties (COP) 13 in 2007 in Bali, Indonesia. Paragraph 1 (b) (II)1 calls for "(n)ationally appropriate mitigation actions by developing country Parties in the context of sustainable development, supported and enabled by technology, financing, and capacity-building, in a measurable, reportable and verifiable manner." NAMAs include any action that is

⁹⁹ Flynn, C., Blending Climate Finance through National Climate Funds: A guidebook for the design and establishment of national funds to achieve climate change priorities, UNDP (New York, 2011, pp. 48-50). ¹⁰⁰ The main sources of the fund are national revenues from Chinese CDM projects and interest earned from its operation. See www.cdmfund.org/eng/index.aspx and "The Case of China CDM Fund". Available from

http://adaptasiapacific.org/events/regional-clinic-design-and-management-national-climate-funds. ¹⁰¹ China CDM Fund. Annual Report 2011.

⁹⁶ Flynn, C., Blending Climate Finance through National Climate Funds: A guidebook for the design and establishment of national funds to achieve climate change priorities, UNDP (New York, 2011).

The BCCRF is being funded by Denmark (\$1.8); the European Union (\$37.6); Sweden (\$19.3); the United Kingdom (\$96.9); Switzerland (\$12.5); AusAID (\$7.1), and USAID (\$13). Available at http://www.bccrfbd.org/page/about-bccrf.html ⁹⁸ See <u>www.bccrf-bd.org</u>.

aimed to reduce emissions in developing countries and should be part of a national governmental initiative. They may include policies directed at transformational change within an economic sector, or actions across a variety of sectors with a broader national focus. NAMAs are defined at two levels: i) at the national level, as a formal submission by Parties declaring their intent to curb GHG emissions in accordance with their capacity and in line with their national development goals; ii) at the individual action level, as a ctions designed to help Parties meet their national mitigation objectives.¹⁰²

NAMAs can be a key instrument to implement low carbon sustainable development strategies – as well as specific sectorial policies and strategies – and help leverage financing, technology and capacity building. Since 2010, 48 NAMA proposals have been submitted by developing countries for inclusion in the Appendix II of the Copenhagen Accord¹⁰³ - many of which are indicated as conditional on receiving appropriate support. Of these, 17 are Asian-Pacific countries.¹⁰⁴ The content of those NAMAs are diverse, ranging from targets and goals for reducing carbon emissions to specific sector-based actions that lead to carbon reductions, such as in energy, energy efficiency, agriculture, forestry, construction and transport sectors. The ESCAP Low Carbon Green Growth Roadmap¹⁰⁵ highlights low carbon development strategies and NAMAs as key tools for green growth and provides practical examples of potential NAMAs. Although each country has different priorities in terms of the sectors and technologies needed to achieve the target, many Asian countries have now set their own target for GHG emissions or relevant indicators, including emissions intensity or energy efficiency.

Many countries are taking their developed NAMAs as a first step and a key input into developing Intended Nationally Determined Contributions (INDCs), as called upon at the COP 19 in Warsaw in 2013, where Parties were invited to communicate INDCs by October 2014 and well in advance of COP 21 at the end of 2015. INDCs will serve to highlight international commitments, but also to galvanize international action towards concerted climate action. INDCs not only serve as a demonstration of national and political commitment, but also offer the opportunity to identify and realize non-climate multiple-benefits to climate mitigation and adaptation action. Such strong signals and clear communication of objectives from countries on their intended actions to climate mitigation and adaptation can stimulate climate relevant investments, technological innovation and also participation by non-government stakeholders.

NAMAs and Climate Finance in Indonesia

Indonesia is arguably one of the most active countries in the region in catalysing resources to drive economic growth while reducing climate risk. The government communicated that its voluntary NAMA will reduce the country's GHG emissions by

¹⁰² See: <u>http://unfccc.int/focus/mitigation/items/7172.php.</u>

¹⁰³ See: <u>http://unfccc.int/meetings/cop_15/copenhagen_accord/items/5265.php.</u>

¹⁰⁴ Afghanistan, Armenia, Bhutan, China, Georgia, India, Indonesia, Kyrgyzswtan, Maldives, Mongolia, Papua New Guinea, Republic of Korea, Singapore, Tajikistan and Thailand. (These are those country NAMAs included in the UNFCCC webpage only. While there may be additional NAMAs this report takes the UNFCCC page as the final count) Available at: <u>http://unfccc.int/meetings/cop_15/copenhagen_accord/items/5265.php</u> Viet Nam and Malaysia also made pledges at Copehagen (2009). Available from www.edbi.erg/files/2013_06_28 heads output on the program growth agin pdf.

www.adbi.org/files/2013.06.28.book.low.carbon.green.growth.asia.pdf. ¹⁰⁵ ESCAP, Low Carbon Green Growth Roadmap for Asia and the Pacific -Turning resource constraints and the climate crisis into economic growth opportunities (Bangkok, 2012).

26% by 2020. This target will be achieved through a variety of means, including: sustainable peat land management; a reduction in the rate of deforestation and land degradation; the development of carbon sequestration projects in forestry and agriculture; the promotion of energy efficiency; the development of alternative and renewable energy sources; a reduction in solid and liquid waste; shifting to low-emission modes of transport. The government also announced that Indonesia's National Action Plan will be equipped with measurable, reportable and verifiable systems which will ensure that each of the abovementioned actions receives adequate funding.¹⁰⁶

Public policy and finance will be the main drivers in achieving such targets. The CPI found that around USD 951 million of climate finance coming from public sources was disbursed in the country in 2011, and while this is still below estimates of the amount of annual finance needed to meet the targets, both international and domestic flows are expected to grow in the near future thanks to the implementation of national policies on climate change mitigation (RAN GRK) and adaptation (RAN API). The Government of Indonesia contributed the largest share of total climate finance, disbursing USD 627 million, or 66%, while international development partners added USD 324 million to domestic sources. 68% of international climate finance was directed towards mitigation and adaptation programmes across the country.

Indonesia represents a good example of alignment of both domestic and international public finance resources with the country's policy needs and priority sectors, where the focus on mitigation activities is in line with emerging national level plans. Those sectors receiving the highest share of climate finance are the most emission-intense: forestry (41%); energy (19%); agriculture and livestock management (10%); transport (9%); and waste and waste water (7%).¹⁰⁷

3.8. Greening National Development Banks and Central Banks

National Development Banks are considered key players in climate finance, given their capacity to leverage international funding and increase its impact and effectiveness thanks to their field knowledge and expertise as well as innovative financing schemes. Furthermore, their capacity to access and coordinate international climate finance represents a key element for enhancing developing countries' effectiveness in combating climate change. Thus, the collaboration with local financial institutions and Finance Ministries has become an essential precondition to ensure that climate finance is used efficiently to catalyse both public and private climate finance investments as well as promote low carbon green economies.¹⁰⁸ Public financial institutions, such as National Development Banks, and Central Banks represent good change agents in advancing environmental sustainability solutions that can help overcome the dilemma of pursuing green policies without sacrificing economic growth in developing countries. Thus, both

¹⁰⁶ See Indonesia's NAMAs at <u>http://unfccc.int/focus/mitigation/pre_2020_ambition/items/8167.php.</u>

¹⁰⁷ Falconer and others, *Landscape of Public Climate Finance in Indonesia* (CPI & Ministry of Finance, Indonesia, 2014).

¹⁰⁸ See for example the meeting on "The Role of National Development Banks in Mobilizing International Climate Finance" held in Washington D.C. on April 18 & 19, 2012, available at

national development banks and central banks should not miss the opportunity to focus on priority change programmes regarding three pillars, namely monetary policy, which consists in encouraging innovation and adoption of green technologies; banking supervision, which concerns the exploration of both costs and opportunities arising from climate change for financial institutions; and payment systems, which points at ensuring eco-friendly products for payment systems.¹⁰⁹

Within the Asia-Pacific region, several countries have been active in pursuing policies to promote green banking, further highlighted in the table below.

Bangladesh	In September 2013, the Bangladesh Bank issued the " <i>Policy Guidelines for Green Banking</i> " document, acknowledging the crucial role of the financial sector in creating opportunities for green business and development. The Policy includes three phases. The first two phases, which included the development of green banking policies, the publication of the "Green Banking and Sustainability Report", were completed in the course of 2014. The third phase, which the Bank aims to complete by June 2015, involves the design and introduction of innovative products, as well as reporting in a standard format with external verification. Moreover, the green banking guidelines introduced disclosure and reporting requirements for green finance on a quarterly basis, and they contributed to the creation of favourable conditions for green investments. The Bank also aims to reduce environmental risk by creating the "Climate Change Risk Fund" aimed at ensuring regular financial capacity in the most vulnerable areas and sectors. ¹¹⁰
Indonesia	The Bank of Indonesia has regulations that require banks to consider environmental sustainability during the assessment of asset quality, as well as conducting environmental impact assessments for large scale or high-risk loans. From 2010, the Bank of Indonesia also began to develop a green banking policy to support sustainable lending practices, and although this is currently on hold due to the transition of authority of financial monitoring to the Bank to the Financial Service Authority, the Bank is providing "green lending training" in the meantime. ¹¹¹
Republic of Korea	In the Republic of Korea, the Ministry of Environment implemented a policy plan in 2011 that allows for the accumulation of "green credits" every time a specific credit card is being used in ecologically friendly transactions, such as savings on utility use (tap water, electricity and gas heating); buying ecologically friendly products (recycled paper or energy efficient light bulbs); or the use of public transport. Once these green credits have been accumulated, they can be used across a variety

¹⁰⁹ C. S. V. Lim, Greener Central Banks: Exploring Possibilities, The South East Asian Central Banks (SEACEN) Research and Training Centre, Staff Paper n. 76 (Malaysia, 2010).

¹¹⁰ ESCAP, Green Banking Policy. The Role of Financial Sector Actors, EDD Briefing Note (ESCAP, October 2014). 111 Ibid.

	of services: restaurants, theatres, hotels, and the purchase of environmentally friendly products (e.g. hybrid cars). ¹¹² Furthermore, Korea Export-Import Banks (KEXIM), an export credit agency, has been increasingly involved in green growth initiatives, providing both financial and non-financial support across a variety of sectors, including new and renewable energy, mitigation, and high-tech energy efficiency. Importantly, KEXIM had its inaugural Green Bond ¹¹³ offering in 2013, raising USD 500 million, a deal which was primarily driven by green investors and which signals EXIM's commitment to green initiatives. ¹¹⁴
People's Republic of China	The China Development Bank (CDB) is utilising development finance as a way to promote the construction of sustainable infrastructure, facilitate industrial upgrading and improving people's wellbeing. By the end of 2013, the total of loans the Bank issued to support green projects had reached RMB 1.191 trillion, which corresponded to 65.8 million tons of standard coal saved and a reduction of 174.47 million tons of CO2 emissions. ¹¹⁵
	In 2012, China revived its 2007 Green Credit policies by developing Green Credit Guidelines to be followed by all Chinese banks, which need to report to the Chinese Banking and Regulatory Commission (CBRC) on key performance indicators. ¹¹⁶ Furthermore, last summer China launched its pilot emission trading scheme (ETS). ¹¹⁷ The Shenzhen ETS is the first of seven pilot GHG cap-and-trade programs, and it covers 635 companies from various industries. ¹¹⁸ So far, five out of seven pilot projects entered the pipeline: as soon as the remaining two will start this year, the aggregate of regulated emissions in China will become the world's second largest after the European Union. ¹¹⁹ The ETS represents a move away from the more traditional policy-based approach to climate change that has characterized China so far, marking a shift towards market-based strategies. ¹²⁰

¹¹² Ibid.

¹¹³ Green bonds are fixed income products that help mobilise private capital for climate-related projects and were developed for institutional investors interested in supporting climate mitigation and resilience projects with their fixed income assets. For more information, see *Green Bonds*, by Heike Reichelt,

www.greengrowthknowledge.org/learning/green-bonds-leveraging-capital-market-climate-change. ¹¹⁴ See Korea's Official Export Credit Agency: In Pursuit of Green Growth, by Korea Eximbank,

¹¹⁴ See *Korea's Official Export Credit Agency: In Pursuit of Green Growth*, by Korea Eximbank, www.greengrowthknowledge.org/learning/green-bonds-leveraging-capital-market-climate-change. ¹¹⁵ *Ibid.*

¹¹⁶ China Dialogue 2014, "UN highlights China's progress on 'greening' its finance sector". Available from https://www.chinadialogue.net/article/show/single/en/6704-UN-highlights-China-s-progress-on-greening-its-finance-sector (accessed 21 April 15).

 ¹¹⁷ World Resources Institute 2013, "Emissions Trading in China: First Steps and the Road Ahead". Available from www.chinafaqs.org/blog-posts/emissions-trading-china-first-steps-and-road-ahead (accessed 21 April 15).
 ¹¹⁸ The Advisory Group on Climate Financing finds that if between 2 – 6% of total market size was auctioned and

¹¹⁸ The Advisory Group on Climate Financing finds that if between 2 – 6% of total market size was auctioned and directed to international climate finance, this could generate from \$2 – \$8 billion under a low-carbon price scenario, or else from \$14 – \$70 billion under a high-carbon price scenario. See AGF, *Report of the Secretary-General's High-level Advisory Group on Climate Change Financing* (New York: United Nations, November 2010).

 ¹¹⁹ World Resource Institute 2014, "Emissions Trading in China: First Reports from the Field". Available from www.chinafaqs.org/blog-posts/emissions-trading-china-first-reports-field (accessed 21 April 15).
 ¹²⁰ Ibid.

4. THE WAY AHEAD FOR THE ASIA-PACIFIC

This paper has provided an overview of some of the key elements of the current state of climate finance at the global and regional level. Though uncertainty remains as to the true extent of public and private climate finance in the Asia-Pacific region due to lack of reliable data, it is clear that substantial gaps for financing climate mitigation and adaptation action exist. Given the extensive impacts on people and the economy anticipated to occur in the region from climate change, mobilizing adequate financing represents a priority for the region. The Fifth Assessment Report of the IPCC emphasized the need for transformations in economic, social, technological, and political decisions and actions to enable climate-resilient pathways for sustainable development. The analysis of relevant country-level initiatives suggests that some key strategies can be identified for the Asia-Pacific region with regards to climate finance, further elaborated below

4.1. Aligning climate finance and financing for sustainable development

While the need is urgent for countries in the region to mobilize the necessary climate finance in order to limit warming to two degrees Celsius and adapt to the impacts of unavoidable climate change, the region also faces a myriad of sustainable development challenges that must be equally prioritized. This includes not only international level commitments such as those proposed by the Open Working Group on Sustainable Development, and the anticipated outcomes of the ongoing negotiations for the United Nations Post-2015 Development Agenda, but importantly, national and regional sustainable development priorities.

Aligning climate finance and sustainable development finance is therefore key to effectively addressing both concerns, particularly as there are a number of multiplebenefits to be derived in terms of sustainable development from climate mitigation and adaptation actions, and vice-versa. This alignment is considered to have positive effects on the region as "it results in a more efficient use of financial and human resources than if climate change and development projects are designed and implemented separately."¹²¹ Sustainable development projects have the potential of being adapted to climate change, while at the same time mitigation and adaptation measures can be conceived in a way that yields sustainable development benefits. Pursuing a national sustainable development strategy that is focused on low-carbon development is one such way to overcome the perceived trade-offs between investing in climate finance and investments in sustainable development.¹²² In the Asia-Pacific region, low-carbon green growth has been identified as one such strategy that aligns climate and sustainable development objectives.

4.2. Re-directing national public finance towards climate change and sustainable development through low-carbon development strategies

Once the need to align sustainable development and climate finance is acknowledged,

¹²¹ Haites, Aligning Climate Finance and Development Finance for Asia and the Pacific: Potential and Prospects, Asian Development Bank (ADB), No.33 (2014). ¹²² Ibid.

this further prompts the question of how to invest additional resources in order to achieve both ends. Governments are emerging as key players in climate financing – facilitating frameworks for climate action and investment through development of appropriate national policy and institutional frameworks, re-directing investments towards climate mitigation and adaptation, and incentivising low-carbon investments in infrastructure and industry through national development and finance institutions.

In order to cover additional investments, appropriate policies and incentives should be pursued at the national level to leverage the significant financial resources that are available to the region. Public financial institutions should facilitate a transition to lowcarbon and greener economies based on national policy frameworks through developing new incentives and reorienting existing public resources to greener activities.

A successful policy framework, together with government incentives and shared initiatives, could prove fundamental in the region's transition to a sustainable low-carbon green economy. It is estimated that over USD 7 trillion in foreign exchange reserves and over USD 2.5 trillion in sovereign wealth funds is available to the Asia-Pacific region. Overall, countries in Asia and the Pacific have among the highest savings in the world. There is thus huge potential to use the region's savings, currently largely invested outside the region. ¹²³ Making only some of these resources available for development in the region would go a long way attaining climate and sustainable development objectives: use of 5% of the currently available Asia-Pacific regional public savings could generate over USD 350 billion of additional resources. National development banks are beginning to establish specialised climate finance facilities to address mitigation and adaptation measures. Particularly climate bonds are expected to undertake a growing trend.¹²⁴

4.3. Mobilizing national private sector and non-government climate finance flows

Despite the key role public institutions will play in mobilizing climate finance, it is clear that the public sector alone will not be able to mobilize the financial flows required to achieve mitigation and adaptation objectives. An ADB study in 2009 estimated an investment need of USD 8 trillion for infrastructure alone.¹²⁵ Other estimates for investments to provide a robust system of social protection range between 5 and 8% of GDP.¹²⁶ Though national development banks are emerging as leaders in climate finance mobilization, equal attention must be directed to facilitating and incentivizing private sector finance flows for mitigation and adaptation efforts. Non-government sources are most likely to contribute an increasing share of both sustainable development and climate finance.

 ¹²³ Most of the region's reserves, for instance, are invested in low-yielding securities in advanced economies, particularly in United States dollar treasury securities.
 ¹²⁴ Buchner and others, Low Emissions Asian Development (LEAD) Program, *Fast Out of the Gate – How developing*

¹²⁴ Buchner and others, Low Emissions Asian Development (LEAD) Program, *Fast Out of the Gate – How developing Asian countries can prepare to access international green growth financing*, United States Agency for International Development (USAID, 2013).

¹²⁵ ADB and ADBI, *Infrastructure Seamless Asia*. Available from

www.adbi.org/files/2009.08.31.book.infrastructure.seamless.asia.pdf. ¹²⁶ ESCAP, *Economic and Social Survey*: forward-looking macroeconomic policies for inclusive and sustainable development (Bangkok, 2013). Available from <u>www.unescap.org/sites/default/files/Economic-and-Social-Survey-</u> of-Asia-and-the-Pacific-2013 1.pdf.

Domestic capital may be mobilized from different sources, such as private investors, commercial banks, and public capital markets. The actual capacity of capital markets is to a large extent determined by the level of economic development of a country, and the national institutional and policy incentives that direct investments towards climate change mitigation and adaptation projects. The main challenge to be addressed in this sector is to shift these investments to low-carbon alternatives. There is also a growing need for governments to provide incentives and mitigate risks for private equity funds to invest more robustly in climate friendly low carbon development initiatives. To this end, policy certainty becomes crucial.¹²⁷ Barriers specific to green investments have been identified, and include: market, institutional and policy failures that make green investments unattractive (price-gap); high risks perceptions on green markets that have long payback period, mainly due to uncertainties and lack of information (time-gap); absence of policy and/or regulatory measures to internalize climate change-related externalities (knowledge gap); low access to finance in developing countries and LDCs in particular; and the instability of the financial systems in those countries.¹²⁸ Addressing this "time gap", "price-gap", "knowledge gap" and other challenges between short-term costs and long-term benefits of green investments requires collaborative action between governments and private sector to overcome the present financial barriers and risks that restrict capital flows into green projects for climate change, thereby leading to increased investment.

While there is no one-size-fits-all policy prescription that applies to the all parts of the world, common key areas to be addressed include the development of effective policies to create investment-grade environments or to compensate for market failures, and securing predictability and policy-certainty for investors.¹²⁹

4.4. Regional and subregional cooperation and support from the international community

Financing for sustainable development is important in Asia and the Pacific in light of its vast population, still high levels of poverty, and adverse environmental impacts associated with its fast development. Greater efforts must be made to invest existing resources within the region. However, it will also be critical to raise additional resources, as outlined above. South-South, triangular and regional cooperation will form further critical complementary elements of a financial strategy in support of sustainable development in Asia and the Pacific.

ESCAP is leading the way for improved regional integration and cooperation. In this regard, the *Bangkok Declaration on Regional Cooperation and Integration in Asia and the Pacific*¹³⁰ emphasized, *inter alia*, that "fostering trade, investment, economic and

¹²⁷ UNFCCC, Investment and financial flows to address climate change, Background paper on analysis of existing and planned investment and financial flows relevant to the development of effective and appropriate international response to climate change. (UNFCCC, October 2007).

https://unfccc.int/files/cooperation_and_support/financial_mechanism/application/pdf/background_paper.pdf¹²⁸ UNEP, *Green Economy, Briefing Paper: Finance* (UNEP, 2012).

¹²⁹ Maheshwari and others, *Mobilizing Public and Private Funds for Inclusive Green Growth Investment in Developing Countries. A Stocktaking Report prepared for the G20 Development Working Group* (International Finance Corporation: World Bank Group, 2013).

¹³⁰ E/ESCAP/RES/70/1. Implementation of the Bangkok Declaration on Regional Economic Cooperation and Integration in Asia and the Pacific.

development cooperation among countries in Asia and the Pacific can create opportunities not only for supporting economic growth but also for achieving wider developmental objectives".¹³¹ The resolution calls on action across four broad areas - moving towards the formation of an integrated market in Asia and the Pacific; the development of seamless connectivity across the region; enhancing financial cooperation; and increasing economic and technical cooperation to address shared vulnerabilities and risks. The Working Group on Shared Vulnerabilities and Risks subsequently launched proposed key streams of action, among them the strengthening science-policy-practice interface, and the leveraging of economic opportunities that could arise from addressing sources of risk and vulnerabilities, for including climate change adaptation efforts.

In addition, ESCAP has been working with countries in the region to develop and integrate low-carbon and sustainable development strategies into national frameworks, and to enhance regional cooperation to deliver on sustainability objectives. Low Carbon Green Growth approaches to policy development can help countries to strategize appropriate development pathways across key sectors – including urban development, transportation, water and energy among others. Low Carbon Green Growth proposes key budget and system reforms that, despite minimal technology and financial support, can launch developing countries on a leap-frogging path to sustainable development and achieving their climate targets. By working with ESCAP member States to set such unified regional frameworks for action, south-south cooperation and flows, including in finance, trade, and technology transfer among others, can be greatly facilitated.

Subregional organizations are increasingly leveraging the benefits of cooperation to address the large gaps in finance and action in the region on mitigation and adaptation. Subregional frameworks for action on climate change can provide a unified vision for countries of similar circumstance and geographic proximity to identify key priorities in line with national development strategies and circumstances, develop win-win partnerships, and take action collectively to maximize impact and learning. By articulating a unified policy vision on climate change for the subregion, international and other climate finance actors can strategically channel resources to tackle priority issues. This includes financing from national public, private and other non-government actors. A subregional strategic vision can support improved trade and knowledge exchange, an opening up of sustainable and climate investment opportunities across markets, and also minimize 'first-mover' risk. And, importantly, subregional consensus can ensure that important issues of concern are raised effectively at the global negotiations.

Governments are not alone in the way ahead, as a number of UN agencies are active in the region with the objective of facilitating developing countries access climate finance. The UN Environment Programme (UNEP), the UN Industrial Development Organization (UNIDO) and the UN Development Programme (UNDP), for example, act as capacity-building platforms to enhance the ability of individuals, organisations and institutions to plan and implement mitigation and adaptation programmes. Alongside UN agencies, multilateral financial institutions are fairly active in the Asia-Pacific.

¹³¹ E/ESCAP/RES/70/1. Implementation of the Bangkok Declaration on Regional Economic Cooperation and Integration in Asia and the Pacific.

5. CONCLUSIONS

There is a widening gap in the Asia and Pacific region between the amount of climate finance directed towards adaptation and mitigation of climate change, and the amount of finance necessary to address these and sustainable development issues. Despite concerted efforts at the international level, climate finance mobilized by international public sources will never reach the levels required to meet investment costs to transform economies in the region to resource efficient, low carbon models. However, countries in the region have at their disposal a number of tools that can be utilized in addition to international finance and capacity support delivered by the international community and United Nations organizations to meet this growing demand for climate finance.

Countries in the region are already leveraging the force of national low-carbon and climate resilient development policies to mobilize and redirect national public climate finance, as well as to incentivize private and other non-government financial flows towards low-carbon development. Key in this effort is the recognition of the multiplebenefits to be derived between climate mitigation and adaptation action and sustainable development objectives in the region. Aligning climate and sustainable development strategies, including through national low-carbon green growth sustainable development strategies, can transform the deficit of climate finance from a burden to a potential opportunity to facilitate a transformation in the region to ensure poverty reduction and economic growth. Aligned national strategies and supporting policy frameworks and interventions can help to incentivize action from a wide range of public and private stakeholders, and mobilize adequate investments in climate and sustainable development in the region.

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