



CLIMATE POLICY INITIATIVE

Updated view on the Global Landscape of Climate Finance 2019

Supported by:



Federal Ministry for the Environment, Nature Conservation and Nuclear Safety



Authors: Rob Macquarie, Baysa Naran, Paul Rosane, Matthew Solomon, Cooper Wetherbee

This work was led under the guidance of Dr. Barbara Buchner.

Acknowledgements: We are grateful to Convergence, Climate Bonds Initiative, and the International Energy Agency for sharing valuable data contained in the report. Finally, the authors would like to thank and acknowledge contributions from Barbara Buchner, June Choi, Elysha Davila, Caroline Dreyer, Angela Falconer and Chavi Meattle for advice, editing and internal review, and Josh Wheeling and Angela Woodall for layout and graphic design.

Recommended citation: CPI, 2020. Updated View of the Global Landscape of Climate Finance 2019 [Rob Macquarie, Baysa Naran, Paul Rosane, Matthew Solomon, Cooper Wetherbee]. Climate Policy Initiative, London.

Related CPI reports:

- Global Landscape of Climate Finance 2019
- Global Landscape of Renewable Finance 2020
- Paris Misaligned An Assessment of Global Power Sector Investment
- Energizing Finance: Understanding the Landscape 2020
- Measuring the Private Capital Response to Climate Change: A Proposed Dashboard

Contact:Rob Macquarierob.macquarie@cpiglobal.orgMatthew Solomonmatthew.solomon@cpiglobal.org

About CPI: CPI is an analysis and advisory organization with deep expertise in finance and policy. Our mission is to help governments, businesses, and financial institutions drive economic growth while addressing climate change. CPI has six offices around the world in Brazil, India, Indonesia, Kenya, the United Kingdom, and the United States.

Copyright © 2020 Climate Policy Initiative www.climatepolicyinitiative.org

All rights reserved. CPI welcomes the use of its material for noncommercial purposes, such as policy discussions or educational activities, under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License. For commercial use, please contact admin@cpisf.org.





Contents

Pages	Section contents
4-9	Introduction and summary of key findings.
10 -15	Updated findings . Annual climate finance flows climate finance flows reached USD 574 billion per year on average in 2017 and 2018. This section breaks down our updated findings by source and use of finance, including changes to our methodology.
16-19	Towards a 2021 Landscape . We estimate climate finance reached between USD 608 – 622 billion in 2019. Although this represents a record level, the COVID-19 pandemic and economic crisis have magnified challenges ahead. This section explores the implications for climate finance flows in our next Global Landscape of Climate Finance.
20-22	Way forward. The outlook for achieving the Paris climate goals relies on shifting focus to alignment across the financial system, to mobilize to scale up low-carbon, climate resilient flows and avoid harmful assets and activities. This section charts a way forward for climate finance tracking and the wider financial system.
23-33	 Annexes: I. Data tables on 2017/2018 climate finance II. Detailed changes to methodology used to track 2017/2018 flows III. COVID-19 impact: framework analysis IV. COVID-19 impact: sectoral detail
34-37	References

Introduction

Purpose and summary of key findings



Introduction

Climate Policy Initiative's flagship analysis, the Global Landscape of Climate Finance ("The Landscape"), has provided the most comprehensive overview of global climate-related primary investment available since 2012. The Landscape aims to comprehensively track domestic and international investment from both the public and private sectors in activities that address and respond to climate mitigation and adaptation actions.

To inform the United Nations Framework Convention on Climate Change (UNFCCC) fourth <u>Biennial Assessment and Overview</u> of <u>Climate Finance Flows</u>, we reviewed estimates using updated data on climate finance flows for the years 2017 and 2018, as previously reported in the <u>Global Landscape of Climate Finance 2019</u>.²

Additionally, this update report offers a preliminary estimate for finance in 2019, drawing on data published in 2020. Reflecting a unique year for the global economy and to set the stage for the next full Landscape in 2021, we also make a high-level and early assessment of the likely impact of the COVID-19 crisis on climate finance flows.

Finally, we look to trends in the climate finance community, in policy and in financial sector practice which will be needed to meet the challenge of aligning finance flows across the whole economy with Paris climate goals.



Headline findings

Based on our updated analysis and estimation following newly available information, **climate finance flows reached USD 574 billion per year on average in 2017/18**. This results in total climate finance flows of USD 608 billion in 2017 and USD 540 billion in 2018 (as compared to USD 611 and USD 546 billion reported, respectively, in 2019's Landscape). The slight decline is the result of adjustments to numbers issued by our data providers after the publication of the 2019 Landscape.

Annual climate finance flows in 2017/18 were 24% higher than the average from 2015/16. While climate finance had been increasing, it was still far lower than the volume needed to address climate change and its impacts.

Based on currently available information, our initial estimate suggests 2019 climate finance flows will amount to USD 608 – 622 billion, representing a 6% - 8% increase from 2017/18 averages, which may result in a return to the record-high levels of 2017.

However, a more precise analysis of 2019 climate finance flows will be provided in the next Landscape (2021) when more primary data becomes available.



Our initial estimate suggests 2019 climate finance flows will amount to USD 608 – 622 billion





Vast investment is required to keep warming within a 1.5° C scenario, according to various studies:

- Through 2050, over USD 1.6 to 3.8 trillion in new climate investment is required for the supply side of the global energy system.³
- New Climate Economy places the total investment cost of necessary changes in non-road transport at USD 467 billion per year.⁴
- The Global Commission on Adaptation estimated annual costs of USD 180 billion globally to adapt to the ongoing and future impacts of climate change.⁵

To reach this target, current investment trends need to significantly shift towards low emissions and carbon resilient development.

The ongoing COVID-19 pandemic and the resulting socio-economic crisis make this mission even more challenging. Ambitious and innovative policies for sustainable recovery and even greater collaboration among public and private actors will be needed to achieve climate goals.

TIATIVE



Vast investment is required to keep warming within a 1.5° C scenario



Updated findings

Climate finance flows in 2017/18



Climate finance flows in 2017/18 were USD 574 billion on average each year

The vast majority (93%) of climate finance flows were for mitigation. With an average of USD 336 billion in 2017/18, renewable energy continued to be the largest end-sector for climate finance (59% of all finance), followed by low-carbon transport (24%). Two-fifths of this flowed to non-OECD countries.

Household / individual investment in electric vehicles (EVs) was responsible for an annual USD 38 billion increase from tracked 2015/16 mitigation finance. Based on new IEA data on EV purchases, this 2017/18 estimate is lower than the figure that appears in the 2019 Landscape by approximately USD 3 billion.

Consistent with the 2019 Landscape numbers, there was an increase of USD 11 billion in adaptation financing in 2018 to USD 35.4 billion compared to USD 24.7 billion in 2017 – almost a doubling. Two-thirds of this was directed towards non-OECD countries. However, data gaps make it challenging to estimate the true nature and volume of adaptation finance, which represents only 5% of total climate finance.

Three-quarters of climate investment in 2017/18 flowed domestically to projects in the same country as the source of finance, highlighting the importance of strong domestic regulatory frameworks, which reduce uncertainty for investors.

East Asia & Pacific was the origin and destination for most climate finance, representing USD 259 billion and USD 249 billion, respectively.

See Annex 1 for more details.

LANDSCAPE OF CLIMATE FINANCE IN 2017/2018

Global climate finance flows along their life cycle in 2017 and 2018. Values are average of two years' data, in USD billions.



574 BN USD ANNUAL AVERAGE

CLIMATE POLICY

INITIATIVE



Refining the landscape of public actors



Our new database adds categories for state-owned enterprises (SOE), state-owned financial institutions (SOFI), and public funds which are now considered as public actors in our updated methodology (see Annex II) based on new data. Previously, all non-financial corporations were counted as private sources in light of challenges around consistently identifying public ownership.

In 2017/18, SOEs invested USD 24.5 billion and SOFIs invested USD 23.8 billion, equivalent to 4% of total climate finance for each.

Private corporations remain the actor type responsible for the most finance, accounting for USD 155 billion per year in 2017/18. This amount is down from the USD 182 billion figure in the 2019 Landscape due to recategorization of SOEs as public actors.

Households and individuals were the second-largest source of private investment in 2017/18, with an average of USD 53 billion.

Recategorization of some commercial FIs as state-owned FIs caused commercial FIs to drop from second to third place in private investment.



Domestic public data gaps are closing...

Domestic public finance is now tracked in our database from state-owned entities as well as public budgets and came to USD 63 billion on average annually in 2017/18.

National tracking of climate finance provides additional data on domestic public flows. It is possible to track around USD 61.5 billion annually in 2017/18 in domestic climate-related finance through a mixture of UNDP's Climate Public Expenditures and Institutional Review (CPEIR), the European Commission Budget, and domestic climate finance landscapes.⁶

Sectors including adaptation, energy efficiency, and agriculture and land use suffer from especially acute data gaps regarding private actors. Approaches, including estimation and collaboration with industry stakeholders, can help expand data coverage in these areas and are a priority for coming years.

Emergent technologies will also be considered to include in future Landscapes. One example is battery storage investment, which reached USD 4 billion in 2018 and 2019, driven primarily by investments in Korea, China, Germany, and the U.S.⁷



... but sectoral gaps remain



Towards a 2021 Landscape

Preliminary 2019 estimate and implications of COVID-19



Climate finance in 2019 is estimated to be just above the 2017 level

Our preliminary estimate of total climate finance for 2019 is between USD 608 - 622 billion, suggesting a 6-8% increase from the 2017/18 average. Our estimate draws on reporting released in 2020 by key groups of actors as well as new research on major sectors.

While 2019 has potential to set the record for climate finance flows in a single year, we anticipate our estimate may change as more data and information becomes available.

Growth was likely driven by development finance institutions. Overall, finance from development finance institutions is expected to surpass its record-high 2017 level owing to significant increases from multilateral development banks (MDBs) and members of the International Development Finance Club (IDFC). Many development banks signaled their intention to lead on climate action.⁸ MDBs increased their climate finance commitments to USD 61.5 billion in 2019 compared to USD 43.1 billion in 2018.⁹

Private finance remained roughly flat from the 2017/18 average. Finance for utility-scale renewable energy assets fell by 7-13% compared with 2018. Small-scale solar grew 16% in 2019 compared to the 2017/18 average, enabling a 35GW year on year increase of installed capacity, with the largest rises in China, the U.S., Brazil, and the Netherlands. Investment in EVs is expected to increase by 6% in 2019 compared to 2018.¹⁰

Therefore, climate finance flows still appear to be far below the level needed to achieve Paris goals. There is also uncertainty over the mid to long-term prospects of climate finance due to the ongoing COVID-19 pandemic.



Near-term impacts of COVID-19 on climate finance stem from an extreme economic downturn and changes in public spending

The impact of the COVID-19 on climate finance will vary greatly across countries and over time. World GDP is forecast to fall by 4.4% in 2020 as most countries face lockdown measures. Advanced economies will likely experience a larger drop in growth, but middle- and low-income countries will suffer from declining domestic resource mobilization, especially resource-rich countries, where tax revenues are vital for governments.¹¹

External private finance for all activity already dropped significantly in March 2020, as non-resident portfolio outflows reached USD 83.3 billion. FDI greenfield investments decreased substantially in the first two months of 2020. However, the impact on official development assistance will not be felt until 2021, since 2020 budgets were approved prior to the onset of the crisis.¹²

In 2020, renewable energy (RE) investments are expected to fall by 10% year-on-year,¹³ but this varies massively with the stringency of national lockdowns. Distributed generation projects, often backed by household and SME investments - both highly vulnerable to lockdown measures – were hit harder than utility-scale projects.¹⁴ Likewise, VC and PE new investments collapsed during spring after a record first quarter.¹⁵ Not all regions face the same impact: for instance, while investors in the U.S. are still confident 2020 RE investment targets can be met,¹⁶ Latin America is forecast to experience a 21% year-over-year fall in PV and wind capacity additions.¹⁷

After 6 months of limited growth, global EV sales are likely to experience their first year-to-year decrease since 2009, as household resources are under prolonged pressure. This will likely impact public investments as well, as EV subsidy schemes are widespread. However, internal combustion engine (ICE) vehicle sales have been hit even harder.^{18 19}



Ongoing fiscal stimulus packages can help achieve longer-term economic transformations



The depth of the economic slump has led to significant public intervention in the economy. The outlook for climate finance over coming years will depend on the interactions between private activity and public support. A framework analysis illustrating these effects and their time frames is shown in Annex II.

Globally, green recovery packages add up to USD 178 billion, with decisive recovery packages in some major economies still being underway. While the EU recovery plan with USD 644 billion of potential green investment is currently delayed by the second outbreak, China expects to announce its 14th five-year plan in March 2021. The next administration in the U.S. may also seek to enact further policies for a green recovery.

Stimulus has prioritized sectors facing the largest impacts such as low-carbon mobility, carbon & climate policies and energy efficiency (further details are presented in Annex IV).

However, carbon-intensive sectors benefited the most from rescue policies in the early stages of the COVID-19 response. Stimulus funding carbon-intensive sectors and companies reached USD 866 billion globally in early October, 56% of which took place in Asia.

Given the irreversible impacts of investments in climate-harmful sectors, future packages will decide whether governments succeed in planning both a short-term economic recovery and long-term structural changes for a systemic transformation of our societies.

Way forward

Systems thinking and outlook



The outlook for climate goals hinges on bold policy and action within the financial system

While upward trends in climate finance are encouraging, we are falling far short of what's needed. Future economic stimulus packages and national climate policies represent a unique opportunity to drive long term transformation for a low emissions and climate resilient future. As such, the delay to climate negotiations should not hold back ambitious national and sectoral transition plans. As states regain capacity following the immediate-term response to the pandemic and begin to manage the recovery, the linkages with decarbonization and resilience must be made clear. Ambition in Nationally Determined Contributions should be supported by plans for implementation, which international coordination and national stakeholders can support.

Job creation must be prioritized for green recovery measures to succeed. Sustained interventions will be necessary to tackle labor force scarring and mitigate protracted unemployment in G20 countries, including a longer-term focus on human capital to enable switching to climate action sectors.

Development finance institutions will be pivotal in driving the recovery. Development finance institutions and multilateral development banks have a unique role to play in recovery through country led policy dialogues and collaboration with the private sector to drive more capital. A summit of DFIs (Finance in Common) called for 'linking short-term needs with long-term transformations.' Public financial institutions will accelerate efforts to embed sustainability into their lending activities.

Greater efforts to crowd-in private finance must link mitigation and resilience more closely. Attempts to crowd-in private capital through blended finance structures will need to consider multiple dimensions of resilience in vulnerable communities, such as energy access and clean and healthy communities.



Assessment of progress against climate goals must consider a systemic perspective covering all financial actors

In 2020, shifting systems to more sustainable and resilient future is not only more urgent but more relevant than ever **before**. The ongoing global pandemic crisis illustrates how our world is highly interconnected and vulnerable to systemic crises, highlighting the fragility of economies and the importance of resilient ecosystems.

All actors in the financial system are part of an ecosystem which functions in concert to channel capital flows, and consequently all actors must work together to align their strategies, business models, investment flows, and risk management frameworks with a pathway to low greenhouse gas emissions and climate resilient development – as called for by Article 2.1.c of the Paris Agreement.

While various organizations are analyzing trends related to parts of the financial system, information is fragmented and incomplete, and measuring progress towards Paris Alignment remains challenging. A huge amount of data is being created demonstrating the steps thousands of actors are taking to align with Paris goals. To discern progress among the noise, any assessment should capture the commitments made by financial actors to address climate change, how these commitments translate into action, and the final impacts and transitions on sectors in the real economy. It should capture all climate-related investment, including those that increase the risk of warming potential and decrease resilience to detrimental effects of climate change.

CPI is currently building a comprehensive and collaborative open-source data and knowledge platform,

operational at the global level and nationally for selected countries, to work towards a comprehensive assessment of the alignment of public and private finance with Paris Agreement goals. Collaboration with organizations that seek to inform and influence alignment across sectors and geographies will be key to helping this effort contribute to scaling ambition and investments.

Annexes



I. Data Tables for climate finance in 2017/2018

Table A.1 – Breakdown of global climate finance by public and private actors (USD billion)

ACTOR	2017	2018	2017/2018 AVERAGES
PRIVATE	268	280	274
Commercial Fl	46	50	48
Corporations	165	147	156
Funds	6	10	8
Households & individuals	41	65	53
Institutional investors	8	8	8
Unknown	2	0	1
PUBLIC	340	261	300
Bilateral DFI	18	26	22
Export Credit Agencies	2	3	3
Government	30	35	32
Climate Funds	3	3	3
Multilateral DFI	56	58	57
National DFI	174	94	134
Public Funds	2	2	2
SOE	26	23	25
State-owned Fl	30	18	24
TOTAL	608	540	574



Table A.2 – Breakdown of global climate finance by sectors (USD billion)

SECTOR	2017	2018	2017/2018 AVERAGES
ADAPTATION	25	35	30
Agriculture, forestry, land-use, and natural resource	7	7	7
management	/	/	/
Coastal protection	0	0	0
Disaster risk management	4	8	6.3
Industry, Extractive Industries, Manufacturing & Trade	0	0	0.2
Infrastructure, energy and other built environment	1	3	2
Others / cross-sectoral	3	5	4
Policy and national budget support & capacity building	0	0	0
Water and Wastewater management	8	11	10
MITIGATION	570	493	532
Agriculture, forestry, land-use, and natural resource management	13	9	11
Energy efficiency	36	32	34
Low-carbon technologies	0	0	0.2
Low-carbon transport	155	115	135
Non-energy GHG reductions	1	0	1
Others / cross-sectoral	10	9	9
Policy and national budget support & capacity building	1	0	1
Renewable energy generation	350	322	336
Transmission and distribution systems	3	3	3
Waste and Wastewater	2	3	2
DUAL BENEFITS	13	12	12
TOTAL	608	540	574



Table A.3 – Breakdown of global climate finance by instruments (USD billion)

INSTRUMENT	2017	2018	2017/2018 AVERAGES
Balance sheet financing (debt portion)	95	93	94
Balance sheet financing (equity portion)	114	131	122
Grant	25	30	27
Low-cost project debt	51	79	65
Project-level equity	52	38	45
Project-level market rate debt	271	168	219
Unknown	1	1	1
TOTAL	608	540	574

Table A.4 – Breakdown of public climate finance by recipients (USD billion)

RECIPIENT	2017	2018	2017/2018 AVERAGES
Private	46	48	47
Public	105	92	99
Public-Private	10	10	10
Unknown	179	110	145
ΤΟΤΑΙ	340	261	300



Table A.5 – Breakdown of global climate finance by region of destination (USD billion)*

REGION	2017	2018	2017/2018 AVERAGES
Central Asia and Eastern Europe	19	24	21
East Asia and Pacific	309	191	250
Latin America & Caribbean	37	37	37
Middle East and North Africa	15	14	15
Other Oceania	12	10	11
South Asia	30	31	30
Sub-Saharan Africa	15	23	19
Transregional	10	15	13
US & Canada	68	93	81
Western Europe	96	101	98
ΤΟΤΑΙ	608	541	574

* Note: due to irregularities in source data, totals differ between geographical tables and headline climate finance results.



Table A.6 – International and domestic climate finance flows (USD billion)*

REGION	2017	2018	2017-2018 AVERAGES
Domestic	480	388	434
non-OECD	315	205	260
OECD	164	178	171
Transregional	1	6	3
International	128	152	140
From Non-OECD to OECD	5	4	5
From Non-OECD to Other Non-OECD	31	38	35
From OECD to non-OECD	42	54	47.8
From OECD to Other OECD	42	46	44
Transregional	9	9	9
ΤΟΤΑΙ	608	541	574

* Note: due to irregularities in source data, totals differ between geographical tables and headline climate finance results.



Table A.7 – International and domestic climate finance flows (USD billion)*

Source	2017	2018	2017-2018 AVERAGES
Domestic	480	388	434
Private	238	240	239
Public	242	148	195
International	128	152	140
Private	30	40	35
Public	99	113	106
TOTAL	608	541	574

* Note: due to irregularities in source data, totals differ between geographical tables and headline climate finance results.



II. Methodological and data updates

Our 2017 and 2018 climate finance numbers have been revised by:

- 1. Adding categories for public actors based on new data. We classified both financial and non-financial state-owned entities in key sectors and regions, to more accurately reflect the source of financing, particularly related to the public-private breakdown. Note that national development finance institutions (including development banks) are not labelled as SOFIs, since they are reported as separate categories. 'Public Funds', which are institutional investors managing funds under public ownership, are another additional category which has shifted from the private to public grouping.
- 2. Updating OECD data for 2018 flows (with a version released in early 2020) which slightly increased the financing amount for 2018 compared to the amount reported in the Global Landscape of Climate Finance 2019 report.
- 3. Improving the methodology we use in processing OECD data to more accurately estimate official development assistance flows by DAC members which have climate benefits. For financial commitments provided by donor governments and their agencies that are reported by those countries as having a "Significant" climate component, we apply a country-level coefficient to capture the specific climate component of each project, slightly reducing the overall climate finance. Previously, this coefficient was not applied to all countries and did not reflect country-level variation in the magnitude of the coefficient.
- 4. Updating data from the IEA on EV purchases, reducing our previous estimate of EV investment by approximately USD 3 billion in 2017 and 2018 each, resulting in an average of USD 39 billion investment in 2017/18.



III. Implications of the COVID-19 pandemic on climate finance in 2020 and beyond

Stage	Immediate	Near to medium-term	Long-term
Time frame	Initial lockdown	Ongoing health crisis, while a vaccine is not available	Post-vaccine (1-5 years of continued recovery after a vaccine is available)
Economic impact	Climate finance suffered from lockdown turmoil. Disrupted mobility and supply chains resulted in delayed or halted projects and investments. In the energy and transport sectors, however, 'green' assets showed more resilience than carbon-intensive ones	Second outbreak and pandemic related restrictions are maintaining economic activity and climate finance below normal. Middle- and low-income countries suffer the most from decreasing resource mobilization.	Debt crisis: public resources will be under great stress from health crisis and response measures, despite a progressively recovering economic activity. Over-indebted countries could need debt relief to fight climate change.
Policy response	Immediate rescue and relief measures focused on health and job retention: climate finance was not the immediate priority, particularly in countries with little monetary headroom. In some cases, urgency led to climate- harmful action.	Government fiscal responses to the downturn involve direct investment or incentives to promote economic activity in the most hard-hit sectors, with substantial climate impact. International flows from donor governments have largely been protected for the course of 2020.	The type and scale of stimulus will shape longer-term economic patterns. The impact on climate finance may depend on the success of fiscal policies in achieving transformational change. Green conditions attached to debt restructuring could shape climate action in EMDEs



IV. Priority sectors of economic stimulus during pandemics

With 36% of 'green' stimulus commitments, low-carbon mobility is the sector which attracted the most finance. Electrified transport alone, represents 25% of green packages. Transport is also the number one priority of recovery packages when it comes to carbon-incentive policies (53% of commitments including 19% for aviation). With restricted mobility in most regions, the sector was particularly hard hit by the crisis leading to multiple airline and car manufacturer bailouts.²¹

Carbon & climate policies²² are the second-largest recipient, with 27% of 'green' investments. This category comprises some adaptation finance flows in nature-based solution projects²³ with great job creation potential.²⁴ However, adaptation flows – though harder to track – are low considering **vulnerable communities are more exposed than ever to climate risk**.

Energy efficiency is the third priority of 'green' stimulus (15%). Amid a global labor crisis,²⁵ investing in buildings' energy efficiency retrofits is a win-win opportunity. Retrofits are labor-intensive, have huge social and environmental benefits through energy cost and emission reductions, and can be backed by efficient governments policies.²⁶



IV. Priority sectors of economic stimulus during pandemics





References



- 1. UNFCCC. Biennial Assessment and Overview of Climate Finance Flows. Available at: https://unfccc.int/topics/climate-finance/resources/biennial-assessment-of-climate-finance
- 2. CPI, 2019. Global Landscape of Climate Finance 2019 [Barbara Buchner, Alex Clark, Angela Falconer, Rob Macquarie, Chavi Meattle, Rowena Tolentino, Cooper Wetherbee]. Climate Policy Initiative, London. Available at: <u>https://climatepolicyinitiative.org/publication/global-climate-finance-2019/</u>
- 3. Intergovernmental Panel on Climate Change (IPCC), 2018. Global Warming of 1.5° C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. Available at: <u>https://www.ipcc.ch/sr15/</u>
- 4. New Climate Economy, 2014. Infrastructure Investment Needs of a Low-Carbon Scenario. Working Paper, December. https://newclimateeconomy.report/workingpapers/workingpaper/infrastructure-investment-needs-of-a-low-carbonscenario-2/
- Global Commission on Adaptation (GCA), 2019. Adapt Now: A Global Call for Leadership on Climate Resilience. Global Commission on Adaptation. Available at: <u>https://cdn.gca.org/assets/2019-</u> 09/GlobalCommission Report FINAL.pdf
- 6. United Nations Development Programme, 2020. Climate Public Expenditures and Institutional Review Database. Available at: <u>https://www.climatefinance-developmenteffectiveness.org/CPEIR-Database</u>. For domestic landscapes, see for example: CPI, 2020. Landscape of Green Finance in India [Jolly Sinha, Shreyans Jain, Rajashree Padmanabhi, Mahua Acharya]. Climate Policy Initiative, Delhi. Available at <u>https://www.climatepolicyinitiative.org/publication/landscape-of-green-finance/</u>; I4CE (2018) Landscape of climate finance in France, low-carbon investment 2011-2017. Available at: <u>https://www.i4ce.org/wp-core/wp-content/uploads/2018/09/I4CE-Low-Carbon-investment-Panorama-des-financements-climat-2017-Final.pdf;</u>
- 7. IEA, 2020. Energy Storage. Available at: <u>https://www.iea.org/reports/energy-storage</u>



- International Development Finance Club (IDFC), 2019. IDFC's Contribution to the Climate Action Summit 2019. Available at: <u>https://www.idfc.org/wp-content/uploads/2019/09/official-idfc-communique-vdef21-09-2019-22h50-cet.pdf</u>; AIIB, 2019. High Level MDB Statement. Available at: <u>https://www.aiib.org/en/news-events/news/2019/_download/Joint-MDBstatement-on-climate-change-finance-FINAL-220919.pdf</u>
- Multilateral Development Banks (MDBs), 2020. 2019 Joint Report on Multilateral Development Banks Climate Finance. Multilateral Development Banks. Available at: <u>https://publications.iadb.org/en/2019-joint-report-on-multilateral-development-banks-climate-finance</u>
- 10. BNEF, 2020c. Electric Vehicle Outlook 2020. Available at: https://www.bnef.com/insights/23133/view
- 11. IMF, 2020d. World Economic Outlook. June 2020. Available at: https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020
- 12. OECD, 2020c. The impact of the coronavirus (COVID-19) crisis on development finance. Available at: <u>http://www.oecd.org/coronavirus/policy-responses/the-impact-of-the-coronavirus-covid-19-crisis-on-development-finance-9de00b3b/</u>
- 13. IEA, 2020a. World Energy Investment 2020. Available at: <u>https://www.iea.org/reports/world-energy-investment-2020/key-findings</u>
- 14. IEA, 2020d. Renewable energy market update, IEA, Paris. Available at: <u>https://www.iea.org/reports/renewable-energy-</u> market-update
- 15. BNEF, 2020d. BNEF interactive Datasets, Sustainable finance. Available at: <u>https://www.bnef.com/core/data-hubs/71/95?tab=Sustainable%20debt</u>
- 16. ACORE, 2020. Expectations for Renewable Energy Finance in 2020-2023. Available at: <u>https://acore.org/wp-content/uploads/2020/07/Expectations-for-Renewable-Energy-Finance-in-2020-2023.pdf</u>
- 17. BNEF, 2020c. Electric Vehicle Outlook 2020. Available at: <u>https://www.bnef.com/insights/23133/view</u>
- 18. BNEF, 2020e. 2H 2020 Latin America Market Outlook: Signs of resiliency. October 30, 2020. Available at: https://www.bnef.com/insights/24597/view



- 20. BNEF, 2020b. Covid-19 Indicators: Automotive and Shared Mobility. Available at: https://www.bnef.com/insights/24125/view
- 21. BNEF, 2020f. COVID-19 Green Policy Tracker. Available at: https://www.bnef.com/insights/24413
- 22. Transport & Environment et al., 2020. Bailout tracker. Available at: <u>https://www.transportenvironment.org/what-we-do/flying-and-climate-change/bailout-tracker</u>
- 22. These include measures for nature conservation, biodiversity, forestry and other areas.
- 23. Carbon Brief, 2020. Coronavirus: Tracking how the world's 'green recovery' plans aim to cut emissions. Available at: https://www.carbonbrief.org/coronavirus-tracking-how-the-worlds-green-recovery-plans-aim-to-cut-emissions
- 24. GCA, 2020. Adapt Now: A Global Call For Leadership On Climate Resilience. Available at: https://cdn.gca.org/assets/2019-09/GlobalCommission_Report_FINAL.pdf
- 25. IMF, 2020d.
- 26. These include measures for nature conservation, biodiversity, forestry and other areas.
- 27. BNEF, 2020f. COVID-19 Green Policy Tracker. Available at: https://www.bnef.com/insights/24413