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MOBILISING CLIMATE FINANCE



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1

THE CLIMATE FINANCE CHALLENGE

The mobilisation of climate finance is vital if the world is to tackle global warming, but in order to realise its full potential, many actors, across both the public and private sectors, must play their full part



Climate finance will have a central role to play if the targets agreed at the 2015 UN climate change conference in Paris are to be met

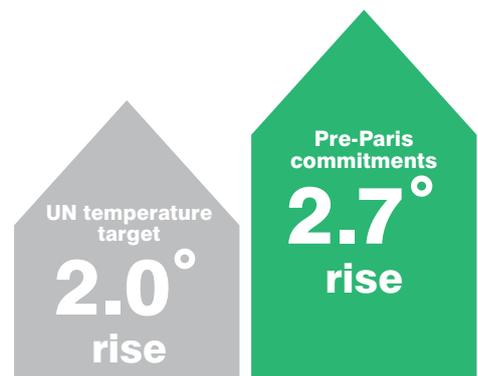
DOMINIQUE FAGET/GETTY IMAGES

CONTROLLING CLIMATE CHANGE is a compelling global challenge. An almost complete scientific consensus confirms that the world must limit the rise in the global temperature to only two degrees Celsius above that of the pre-industrial age. Yet, ahead of the United Nations (UN) December 2015 climate conference in Paris, the intended nationally determined contributions (INDCs) of over 160 countries added up to a 2.7 degree rise – well above the two-degree limit the world needs. How will this shortfall be met?

Climate finance can provide a solution, but only if a broad array of actors play their full part. Mobilising climate finance requires a swift scaling up of existing

THE TEMPERATURE IS RISING

Ahead of the Paris conference on climate change, national plans fell short of the target to limit global warming to two degrees above pre-industrial levels



mechanisms and the introduction of innovative measures from many international institutions, national and sub-national governments, private sector firms and associations, civil society bodies and individuals in their daily lives.

The required sum is formidable, must be raised fast, and put to work in the best way. Many players must produce the money, regulations, standards, accounting and auditing, financial instruments and markets, and innovations required for the mitigation, adaptation and resilience activities to decelerate climate change.

It will not be easy, as climate finance is arguably the most difficult part of meeting the climate change challenge. The money mobilised thus far is inadequate. Constrained by today's slow economic growth and the need to rebuild fragile balance sheets after the great global financial crisis of 2008, cash-strapped actors following familiar financial models are still doing too little, even to meet the promises they have already made. Many are reluctant to act with the speed, scale and smart solutions needed to meet the looming deadlines in the political and physical world. And governments are not providing the regulatory certainty and incentives on a global scale that the private sector needs to play its full part.

Still, some are already pioneering and perfecting new models and innovative approaches that promise to work. The business case is compelling, as the economic costs of uncontrolled climate change vastly exceed the climate investments needed to prevent them. These costs, Lord Stern said in March 2015, were \$3 trillion per annum within the next decade in infrastructure finance for emerging and developing countries. The initial step is for developed countries to raise \$100 billion per year by 2020 in finance for developing countries from public and private sources, as agreed at the last UN climate summit in Copenhagen in 2009. Beyond this, much larger sums are needed to keep global warming at or below the limit of an additional two degrees.



REX FEATURES

\$3tr

The sum Lord Stern predicts is needed per annum in finance for developing countries to prevent uncontrolled climate change

Financing the transition: the 4Rs of system reform



Nick Robins
Co-director, United Nations Environment Programme Inquiry into the Design of a Sustainable Financial System

Harnessing the financial system is essential if we are to make a successful transition to a low-carbon, resilient and sustainable global economy. We need far more capital for low-carbon assets, considerably less capital for high-carbon investments and much deeper resilience to mounting climate shocks, particularly in the developing world.

Overcoming these challenges requires a systemic response. Building on its long-standing partnership with the banking, insurance and investment sectors through the UNEP Finance Initiative, in January 2014 UNEP established the Inquiry into the Design of a Sustainable Financial System. The focus of the Inquiry was to identify steps being taken by financial system rule-makers such as central banks, regulators and standard-setters to incorporate sustainability factors into the fabric of the financial system.

What the Inquiry found was a ‘quiet revolution’ in policy and practice, captured in its global report, *The Financial System We Need*. Twenty-seven of the world’s leading stock exchanges are now working together to include sustainability into their listing requirements for companies. Regulators across 14 jurisdictions now require pensions funds to disclose information on their approach to environmental, social and governance (ESG) issues. As Mark Carney, Governor of the Bank of England, commented recently, “green finance cannot conceivably remain a niche interest over the medium term”.

Looking ahead, the tasks for financial system reform in the face of climate change can be summarised as the 4Rs of capital raising, enhanced responsibilities, strengthened risk management and systematic reporting.

1. Capital raising

Considerable financial innovation will be required to mobilise the sums required for the transition. A critical arena are the world’s \$100 trillion debt capital markets, where issuance of green bonds grew three-fold in 2014 to \$36 billion. With the Climate Bonds Initiative, the Inquiry has highlighted 10 steps that policymakers can take to expand the green bond market, including supporting principles and standards.

2. Enhanced responsibilities

Greater clarity is also needed on the responsibilities of financial institutions for managing sustainability factors. In the investment world, a landmark report on global practice published this year concluded that “failing to consider long-term investment value drivers, which include ESG issues, in investment practice is a failure of fiduciary duty”.

3. Risk management

Leading banks, insurers and investors are intensifying the ways in which they respond to climate risks. For example, the Portfolio Decarbonisation Coalition has brought together institutional investors seeking to cut carbon emissions in \$100 billion of assets by COP21. Policymakers can help to strengthen this trend by encouraging the use of sustainability stress tests. France is the first country to announce that it will include climate factors into the routine stress tests for its banking sector.

4. Systematic reporting

Better flows of information underpin all of these tasks. One of the key developments in 2015 has been the decision taken by the Financial Stability Board to propose a new climate disclosure task force. This will take stock of existing practice, identify the needs of users of climate information and potentially develop common disclosure principles.

Taken together, these steps will not just help to ensure a smooth transition to a climate secure economy, but could also contribute to the efficiency and effectiveness of the financial system as a whole.

2

PROGRESS SO FAR

The key players in climate finance are making some progress, but need to do more. Among the world’s major intergovernmental institutions, the United Nations takes centre stage

United Nations

The UN’s Rio de Janeiro summit in June 1992 embedded climate finance within the resulting Rio Declaration and UN Framework Convention on Climate Change (UNFCCC). Here, developed countries agreed to give developing countries additional funds for climate-resilient and sustainable economic development.

The UN established the Global Environment Facility (GEF) for this purpose. The GEF currently operates four distinct funds, including the innovative Adaptation Fund, launched under the UNFCCC Kyoto Protocol in 1997. The Adaptation Fund takes a 2% share of certified emissions reduction (CER) sales and donations from the government and private sector. Since 2012, \$331 million has been committed for climate-friendly projects.

At the 1992 Rio Earth Summit, the United Nations Environmental Programme (UNEP) also established the Finance Initiative to assemble the banking, insurance and investment sectors for developing and implementing environmentally friendly projects. Its mission is to bring “systemic change in finance to support a sustainable world”.

Additionally, the UN’s Green Climate Fund (GCF) was launched as a legal entity in 2010 in Durban at the Conference of the Parties (COP) 17, pursuant to the 2009 Copenhagen Accord. The GCF seeks to promote a paradigm shift to climate-resilient economic growth. To date, \$10.2 billion has been pledged by 38 states. Of that, \$5.9 billion has been signed for disbursement. The money is moving from GCF headquarters in Songdo, Korea, into the field, with \$168 million for the first eight projects now approved.

\$10.2bn

**GREEN CLIMATE FUND
COMMITMENTS HAVE BEEN
PLEDGED BY 38 STATES**

\$5.9bn

**OF THAT SIGNED
FOR DISBURSEMENT**

Multilateral development banks and funds

The world’s major multilateral development banks (MDB) have mobilised an estimated \$28 billion in climate finance. In July

2008, the World Bank Group approved the Climate Investment Funds (CIF), which received over \$6 billion in country pledges that year. The designated Trustee of the CIF, the World Bank Group's International Bank for Reconstruction and Development, has created two other operating trusteeships to receive and manage donor contributions. An MDB committee is responsible for disbursing donations. The African Development Bank (AfDB) alone mobilised \$760 million in 2014 for adaptation and \$1.16 billion for mitigation efforts.

Group of Twenty (G20)

The G20 is a critical actor, accounting for a strong majority of the world's gross domestic product (GDP) and carbon emissions. At its third summit in Pittsburgh in September 2009, it promised to phase out inefficient fossil fuel subsidies in the medium term and catalyse investment in energy efficiency, clean energy and renewables. Its G20 Energy Sustainability Working Group advanced work on energy efficiency. Leaders also tasked their finance ministers to report on options for climate finance. Yet, at their meeting in St Andrews in November, BRICS (Brazil, Russia, India, China, South Africa) finance ministers successfully insisted that climate change be left to the UN.

At the Seoul Summit in November 2010, G20 leaders again pledged to support climate finance. At Cannes in 2011 they identified it as a priority and endorsed the UN agreement to raise \$100 billion a year by 2020. But they did not act ambitiously on the report on climate finance they had requested from the World Bank, International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD) and regional development banks. At Los Cabos in 2012, leaders created a study group on climate finance, but three years later it had agreed only to share information and experience. At St Petersburg in 2013, they offered to help start the Green Climate Fund.

A year later they created the Brisbane G20 Energy Efficiency Action Plan, which identified energy efficiency as an investment class, despite containing many scattered small projects whose returns were hard for financial institutions to quantify. The plan needed analytical tools to provide credit and risk certainty and smart policies and programmes from governments. G20 leaders created the International Partnership for Energy Efficiency Cooperation (IPEEC) Finance Task Group, led by France and



The G20 members account for most of the world's carbon emissions

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The G7 leaders have committed to increasing access in developing countries to insurance against the effects of climate change, such as flooding

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Mexico, to work with financiers to increase capital for energy efficiency investment. Its Energy Efficiency Finance Task Group was composed of G20 members and the IPEEC, supported by the OECD, the World Bank, the International Energy Forum, the Energy Efficiency Financial Institutions Group and UNEP, to foster a high-level dialogue with private sector financiers.

In spring 2015, the G20 asked the Financial Stability Board (FSB) for recommendations about the climate risk to global financial stability and economic growth. Mark Carney, FSB Chair and Governor of the Bank of England, subsequently identified direct risks to insurance companies from extreme weather events, liability claims for losses caused by climate change and transition risks, primarily from stranded assets. The Intergovernmental Panel on Climate Change (IPCC) had estimated that two-thirds of fossil fuel assets should not be sold if warming was to be kept below a two degree rise. Carney called for standards for disclosure of climate risk, similar to those used for financial risk.

Group of Seven (G7)

The G7 has been a pioneer in global climate governance since 1979. At its 2015 summit in Elmau, it received a background report on long-term climate finance from the German host. The leaders subsequently declared their “aim to increase by up to 400 million the number of people in the most vulnerable developing countries who have access to direct or indirect insurance coverage against the negative impact of climate change related hazards by 2020”, building on the work of the African Risk Capacity facility

and the Caribbean Catastrophe Risk Insurance Facility. They further promised to raise \$100 billion a year for the GCF, make it fully operational by 2015 and have it become the central body for climate finance. The G7 leaders also pledged to engage proactively on climate finance at the UN's Paris Summit, ask the MDBs to fully use their balance sheets for climate finance, accelerate access to renewable energy in developing countries, build on the Global Innovation Lab for Climate Finance, eliminate inefficient fossil fuel subsidies, and mobilise export credits via discussions at the OECD.

Regional institutions

At the regional level, the European Union has long been a leader in climate finance. Its emissions trading system currently prices carbon emissions at €7 per tonne, adding 1% to the cost of coal-

generated electricity. It has also recently created the Juncker Plan for infrastructure investment.

With the rise in extreme weather events, the insurance industry is increasingly relevant. The Caribbean Catastrophic Risk Insurance Facility, formed in 2007, was the first to offer insurance policies for natural disasters. So far, \$38 million has been paid out to eight countries afflicted by cyclones, hurricanes, earthquakes and excess rainfall. The African Risk Capacity, an arm of the African Union, also uses risk pooling and transfers,

among other financial mechanisms, to support the basic needs of people affected by natural disasters.



A solar farm in India, where Germany has pledged money to support clean energy projects

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National and sub-national governments

National governments in developed and developing countries are also contributing.

The United States is leading through USAID, one of three governing agencies of the Global Climate Change Presidential Initiative. The initiative reaches over 50 climate-vulnerable states in the developing world with funds to foster low-carbon and sustainable economic growth.

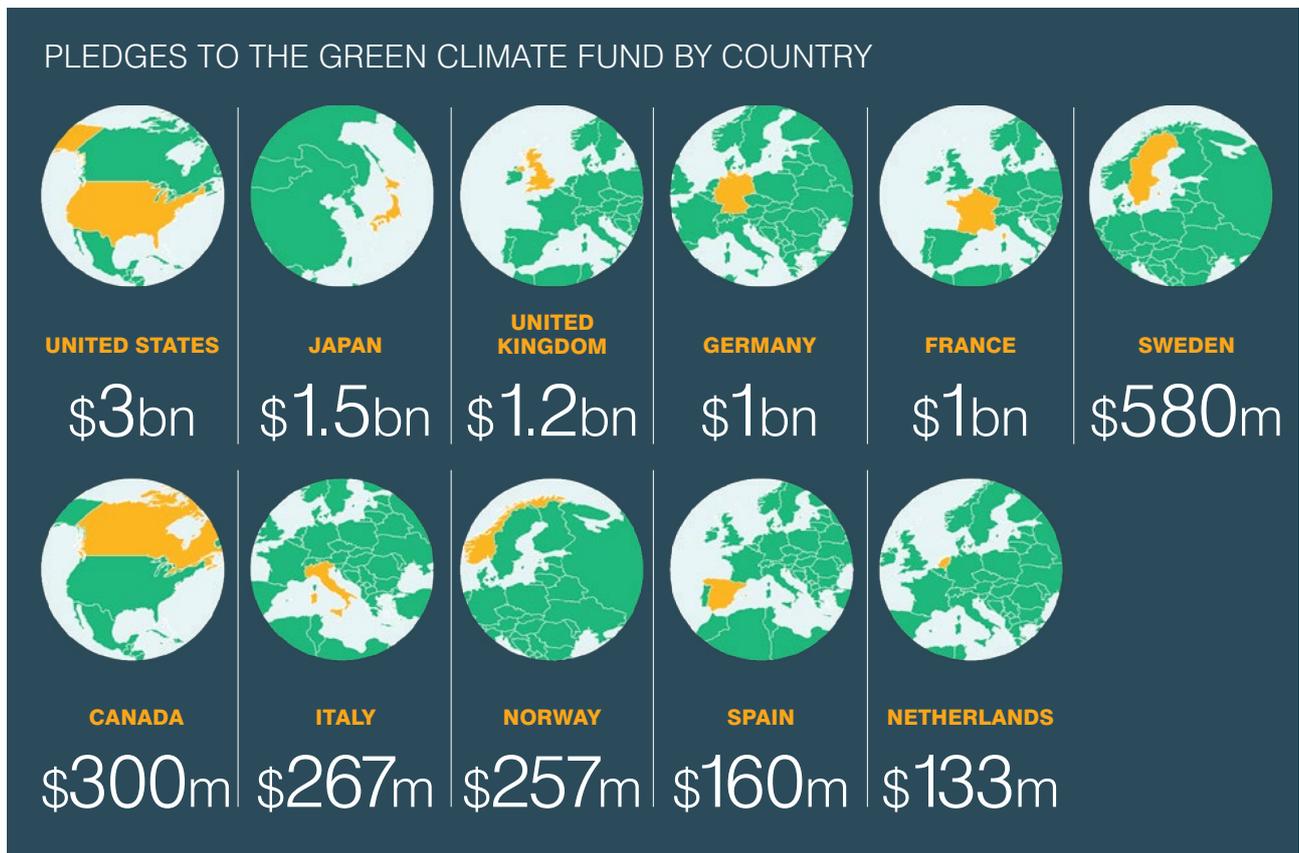
German Chancellor Angela Merkel has amended Germany's development assistance programme in Asia to include renewable energy expansion and biodiversity protection. Up to €1 billion has been allocated to India's "green energy project", which seeks to improve wind and solar capacity.

Rwanda and Kenya are leaders in the developing world. In 2012, Rwanda launched FONERWA, a climate change fund that invites enterprises to submit clean energy proposals. It is a cross-sectoral mechanism that provides direct access to funds, with lines of credit and grants, for climate-resilient projects. In 2013, Kenya created the National Climate Action Plan that includes provisions for private sector inclusion. Indonesia, Brazil, Mexico and the Philippines have also established national climate funds.

Sub-national governments such as regions, states and cities, have joined national governments in introducing carbon-pricing instruments, whose number has almost doubled from 20 to 38 since 2012. By 2015, there were 39 national and 23 sub-national jurisdictions pricing carbon. They covered half of the emissions in their jurisdictions and about 12% of global emissions overall.

The private sector

The private sector is critical, especially given the constraints on public finance. The banking sector manages assets of about \$140 trillion; institutional investors, such as pension funds over \$100 trillion; and capital markets including bonds and equities manage over \$100 trillion and \$73 trillion respectively, as estimated by the UNEP-supported Inquiry into the Design of a Sustainable Financial System. In 2014, at the UN Climate



Summit in New York, the private sector demonstrated a concerted interest in shifting its attention to green investments. Of particular importance are ‘green bonds’, instruments issued by public or private actors to finance activities declared to have carbon-reducing effects. Green bond issuance tripled to more than \$36 billion in 2013-14, but fell to less than \$30 billion by September 2015. In the private sector, in 2015 HSBC launched a \$1 billion green bond fund, TD Bank issued a \$454 million bond for “continuing a low carbon economy”, and Unilever a \$250 million bond “to reduce the company’s carbon footprint”. At times, these bonds are certified and rated by a second-party standards agency, such as DNV GL or Cicero. In 2015, projections put the green bond market at \$50-70 billion in value.

The insurance industry and carbon-intensive sectors, notably the energy industry, also have front-line roles. In June 2015, six of the world’s largest oil and gas companies wrote an open letter to the UN demanding global leaders put a price on carbon. The letter was welcomed by World Bank President Jim Yong Kim as an “important step” towards a low-climate-risk future. Some of the letter’s authors are already working towards this goal. Statoil, headquartered in Norway, announced in November 2015 its intention to invest in the world’s first floating wind farm off the shores of Scotland.

Civil society

Civil society, led by non-governmental organisations (NGOs) and philanthropists, contributes too. NGOs are particularly well equipped to hold firms and governments accountable. In 2013, the Adaptation Finance Accountability Initiative was launched collectively by the World Resources Institute, Overseas Development Institute, and Oxfam to track adaptation expenses in developing countries, starting with Zambia, Nepal, Uganda and the Philippines.

Philanthropist Bill Gates, in June 2015, promised to double his personal investment in next-generation green technology to \$2 billion over five years. He called on governments to triple their support for renewables. A month later, Wendy Schmidt offered a prize of \$2 million to scientists who worked out how to measure the rising level of acidity in oceans caused by carbon dioxide.



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Climate finance: a moral and survival issue for Africa



Jacqueline Chenje,
Africa Climate Policy
Centre, Economic
Commission for Africa

Of all the continents, historically Africa has contributed the least to the emissions of greenhouse gases that have caused today's climate change catastrophe. Yet, it will be most severely impacted. Climate finance is therefore a highly contentious issue for Africa and represents a moral and survival issue in the context of the United Nations Framework Convention on Climate Change (UNFCCC) negotiations.

Since the UNFCCC was signed at the Rio Earth Summit in 1992, Africa has taken a strong stand on climate finance. Intrinsicly linked to the historical responsibility of industrialised countries as the heaviest emitters of greenhouse gases, Africa

considers the provision of funds as a moral responsibility of emitting nations.

Yet, more than two decades later, African negotiators are still wrangling on issues of scale, predictability and additionality of climate finance.

Faced with enormous challenges arising from climate change, the continent remains undivided on the position that adaptation and loss and damage should be compensated. As such, African negotiators played a prominent role in the negotiations that led to the Copenhagen Accord and Cancun Agreement, which promised climate finance, starting at \$10 billion a year from 2010-

12, and increasing to \$100 billion by 2020. More recently, they have been involved in the design of the Green Climate Fund (GCF).

Africa continues to see climate finance as one of the fundamental pillars of the successor treaty to the Kyoto Protocol that will be negotiated in Paris in December to ensure the survival of the continent's most vulnerable and to sustain development growth trajectories through adaptation and mitigation measures.

The financing gap

Estimates suggest that the region requires roughly \$12-31 billion per year and \$18-30 billion per year in order to meet the challenges of mitigating and adapting to climate change, respectively. Yet, current financing to meet these demands is woefully inadequate. Between 2008 and 2012, only \$10 million per year was provided for mitigation-related activities and, between 2003 and 2013, only \$80 million per year was provided

for adaptation. The gap is wide.

African states are also seeking to ensure the additionality of climate finance, a concept that arose due to considerable

overlaps between development and climate finance and the danger that funding is diverted from existing development assistance. Although no internationally agreed definition exists, it is generally understood to mean that funds provided for climate activities must be genuinely new and not simply diverted from existing sources, such as official development assistance (ODA).



**AFRICA CONSIDERS THE
PROVISION OF FUNDS AS
A MORAL RESPONSIBILITY
OF EMITTING NATIONS**





Clear and transparent regulation will help attract investors to Africa's renewable energy market
ISTOCK IMAGES

The average annual total ODA disbursement to Africa from 2003-13 was about \$44.2 billion. As such, any climate finance should be additional to this amount and optimally should amount to 1.5% of the gross domestic product of developed countries.

There is a need not only to step up financing, but also to ensure that these funds and investments are disbursed with greater transparency and provision for long-term planning. Equally important is the accessibility of climate finance. Current complicated application, evaluation, monitoring and reporting procedures required for the disbursement of funds are mitigating the purposes for which they were established.

Improved functioning of the Clean Development Mechanism (CDM) and other carbon markets, including private carbon markets, is needed to ensure that they benefit African states. As a number of studies have shown, the CDM is a legitimate project-

based mechanism that potentially presents opportunities for leveraging additional funding for climate change projects on the continent. If properly designed, it can be important for financing low-carbon development in the region. Africa must therefore be more committed to working with others to enhance the efficiency of carbon markets.

Africa also has the responsibility to look inward and proactively pursue and leverage other sources of finance. By deploying clear, coherent policies and transparent regulatory frameworks, it can attract private sector investment to the continent's burgeoning economic sectors, such as the vibrant renewable energy market. Meanwhile, development banks and climate funds can play a vital role in leveraging the flow of private capital. Domestic resources mobilisation through tax reforms and stronger finance administration can also raise substantial climate finance at the local level.

3

CONSTRAINTS ON CLIMATE FINANCE

Thus far, however, these key actors have encountered formidable constraints in mobilising the needed climate finance. The biggest limiting factors include:

- 1 In the wake of the 2008 global financial crisis, there is a real and perceived shortage of finance, especially with so many competing demands. Many governments, financial firms and citizens suffer from rising deficits and debts, impaired balance sheets, reduced creditworthiness, wariness about an uncertain future and the need to care for ageing populations, as well as coping with new geopolitical and terrorist threats.
- 2 Many actors are tempted to wait for others to move first to prove what works. This is partly because the costs of climate finance are immediate and specific, but the benefits come later and are more diffuse and still somewhat uncertain.
- 3 There is little consensus on a fair burden-sharing formula between advanced and developing countries, the public and private sectors, and which international institutions should take the lead. The least developed countries (LDCs) argue they played only a minor role in the acceleration of global warming, yet they have suffered the most. Between 2010 and 2013, deaths caused by climate-change-induced natural disasters in LDCs were five times the global average, according to the International Institute for Environment and Development. Yet, the balance of climate pollution creation is now rapidly shifting, with China surpassing the US in 2005 for first place in annual greenhouse gas emissions. The majority of carbon concentrated in the atmosphere will soon come from developing rather than developed states.
- 4 There is ongoing debate about the institutions to which climate finance would be best sent, and how it should be governed, managed and deployed.

“

**MANY ACTORS ARE TEMPTED
TO WAIT FOR OTHERS TO
MOVE FIRST TO PROVE
WHAT WORKS**

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- 5 There are few compelling, widely known success stories of its proven beneficial impact on the climate that inspire others to act.
- 6 Disputed definitions of 'climate finance' abound. What counts as climate finance and as additional finance for climate purposes? Should investments in large-scale hydro-dams that displace communities and alter the local eco-system count? Poor monitoring, reporting and verification provide further constraints. Disputed definitions have contributed to the slow implementation of the G20's 2009 fossil fuel subsidy phase-out pledge and the rapid scaling up of green bonds.
- 7 Independent standard setters often measure potential, not actual, results, due to the unpredictability of climate change, address a broad class of projects rather than specific ones, and use unclear and proprietary methodologies.
- 8 Outdated government rules inhibit green procurement. New requirements for banks' total loss-absorbing capital to guard against financial risk leave less room for additional layers to guard against climate risk.

4

PIONEERING FINANCING MODELS

Despite these challenges, there are many examples of innovative financial instruments and legislation that are leading the way

HOWEVER, SEVERAL PIONEERING models and moves are proving their worth in climate measurement, adaptation, mitigation and the reduction of emissions from deforestation and forest degradation. Many of these models can be scaled up and out.

At the international level, the IMF recently mobilised its formidable financial expertise to estimate that \$5.3 trillion could be saved by governments if fossil fuel subsidies were stopped. The IMF could next move to incorporate climate finance into its loan and debt relief packages. At the national level, France passed a law in 2015 requiring investors to disclose environmental and climate impacts in their portfolios. This inspired the European Commission to draft plans for a similar standard of mandatory disclosure.



China's Clean Development Mechanism Fund has generated grants for over 200 projects so far
CHINAFOTOPRESS/GETTY IMAGES

The UN-supported Montreal Pledge on Principles for Responsible Investment was launched in 2014, allowing investors to commit to measuring and publicly disclosing annually the carbon content of their investment portfolios. By October 2015, 80 investors with over \$7.6 trillion in assets in management had signed. Additionally,

by September 2015, fossil fuel divestment campaigns had encouraged over 440 institutions to commit to eliminating their fossil fuel holdings.

The UNEP's Finance Initiative has also created the Portfolio Decarbonisation Coalition to encourage institutional investors to decarbonise their portfolios. Investors have already committed to decarbonise about \$100 billion of their equity portfolios. Such voluntary initiatives may well become mandatory in the future.

The Scaling-Up Renewable Energy Program in Low Income Countries (SREP) is one of four funding windows governed by the World Bank's Climate Investment Fund. To date, SREP has approved \$136 million for 12 projects related to scaling up renewable energy technologies, including for the expansion of clean cookstoves and geothermal energy in Kenya. SREP's efforts to catalyse development of a low-carbon energy industry are being realised with the help of the private sector. The MDB committee accepts project proposals from the private sector and has thus far allocated \$92.4 million in concessional financing. In order to be approved, proposed projects must meet five criteria. One is commercial sustainability, which requires that project expansion can be realised in the absence of additional concessional financing.

Shifting subsidies from carbon-creating to carbon-reducing activities and introducing carbon pricing through a cap and trade, tax, or border tariff, including on airlines tickets, are appearing in Europe.

At the national level, China's Clean Development Mechanism Fund uses a revolving fund that has generated \$81 million in grants for over 200 projects. It claims to have reduced about seven million tons of carbon dioxide equivalent.



The car industry has been partly responsible for the growth of green bonds; Toyota has issued \$3 billion since 2014

GETTY IMAGES

In the private sector, banks are setting aside funds and investing in climate change control. Citigroup plans to invest \$100 billion over 10 years in the renewables, transport and housing industries. The Bank of America has announced that it will invest \$125 billion in similar initiatives.

Green bonds received a boost on 13 October 2015, when the Agricultural Bank of China sold the country's first green bond from a Chinese bank for \$1 billion. It will be listed on the London Stock Exchange. The UN expects that the green bond market will expand by the end of 2015 to between \$50-70 billion. Part of this growth will continue to come from the auto industry. Toyota, for example, issued \$1.75 billion and \$1.25 billion in 2014 and 2015, respectively.

Major bond rating agencies are starting to report on green bonds with standardised due diligence, as investors are asking for more evidence of their green impact. Stakeholders are meeting in Paris to discuss raising the quality and reliability of their role. The Sustainability Accounting Standards Board (SASB) has developed standards to ensure firms are honestly disclosing the 'material' climate-related risks they are planning to take. Standard & Poor's has started to include climate risk in its credit ratings. The low-lying developing countries most vulnerable to extreme weather events have the lowest credit rating, while countries north of the equator fare much better.

Individual firms are also acting internally. Microsoft voluntarily introduced a carbon fee in 2012 in order to become carbon neutral. The fee varies annually, based on the cost of the company's internal energy efficiency. It has already purchased over 10 billion kilowatt-hours of climate friendly energy, reduced 7.5 million tons of carbon dioxide equivalent and saved over \$10 million per year.

Finally, crowdfunding allows the general public to participate. The GCF has expressed interest in expanding its donation sourcing to include smaller investors. It estimates that it can generate an additional \$500,000 to \$40 million for each approved green project.

GROWING THE GREEN BOND MARKET

If the correct conditions are established, the green bond market, which is now worth \$77 billion, can be expanded to deliver on global climate targets

TO LIMIT GLOBAL WARMING to agreed levels, the International Energy Agency estimates \$53 trillion must be mobilised by 2035. The green bond market can help meet this need if governments create incentive structures that lower the costs for sustainable investments. It is crucial that the benefits of fundraising in the green bond market outweigh the barriers of entry as issuing in green format does involve a little extra work on the part of issuers. According to Ulrik Ross, HSBC Global Head of Public Sector and Sustainable Financing, “those incentives could be subsidies, tax exceptions or easing regulations for risk-weighted assets aligned with climate financing”.

Banks have played a vital role in growing the green bond market. “We recently announced a \$1 billion green bond investment portfolio in liquid assets and issued the HSBC inaugural €500 million five-year Green Bond,” says Ross. “We will continue to innovate from a product and solutions perspective.” Investors in green bonds tend to be loyal, and see the benefits of aligning their business with a sustainable sector. “We do not see access to financing as the number one challenge to building scale in the green bond market,” says Ross. “Instead, the private sector faces a bigger challenge in finding more issuers willing to do the extra work associated with green bonds.”

There may be no shortage of capital, but people must sometimes pay more for technologies associated with green infrastructure and the green energy assets must still compete against other asset classes. Investors need confidence that, in doing the right thing, they will be treated fairly for the risks and rewards of green investments.

Today, in France and probably soon in Sweden, asset managers are being asked to report on climate impacts. Meanwhile, the United Kingdom is discussing climate stress testing with the banking industry. As Scott Dickens, Global Co-Head of HSBC’s Infrastructure Financing Group, says, “It has to start at the top. This is about governments setting an agenda across the globe in a coordinated fashion. The private sector needs access to efficient financing and incentives to help deliver the change that is required.”

Supranational and multilateral institutions can help develop new products and reduce the capital costs for key infrastructure projects. Indeed, the World Bank Group (WBG), IFC, European

THE CHALLENGE

In order to limit global warming to internationally agreed levels, vast sums of money must be rapidly mobilised.

Requirement by 2035

\$53
trillion



“

**WE WILL
CONTINUE TO
INNOVATE FROM
A PRODUCT
PERSPECTIVE**

ULRIK ROSS

Global Head of Public Sector and Sustainable Financing, HSBC

”

Investment Bank and KfW have driven the green bond agenda, even without regulation or price-supporting initiatives.

The Green Climate Fund and the UK's Green Investment Bank are mobilising more risk capacity, but have limited mandates. "There must be more support across all asset classes and capacities, and more efficient procurement procedures," says Ross. "There is not yet enough risk capacity in the market today to support the global climate agenda. The public sector has to take ownership of this part, in order to mobilise scale in sustainable financing through the private sector."

HSBC has been an active member of China's Green Finance Committee – led by the People's Bank of China – and has been contributing on, amongst other areas, how to build an integrated green capital market between the domestic and international markets. With the renminbi market the third largest in the world, China could lead the way, as it develops plans to launch the first incentivised green bond market.

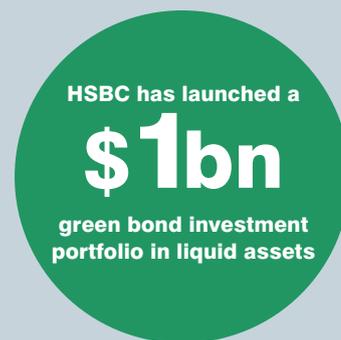
In Europe, the Juncker Plan is "a defining moment for European infrastructure", according to Dickens. Europe has committed to deliver a sizeable, transparent, coordinated infrastructure plan that focuses on transportation, renewable energy and network connectivity. The plan increases the financing available for these projects and reduces the financing cost.

Moving to a low-carbon energy industry requires a regulatory regime that imparts confidence that tariff structures and regulations will not diminish returns on investments. Barriers to entry need to be reduced and efficiency increased in order to achieve the lowest cost of capital. The Juncker Plan and the European Fund for Strategic Investments will help.

However, the public sector must lead in balancing the speed and cost of decarbonising energy sources. "There must be fewer incentives to carbonise and more incentives to decarbonise," says Dickens, noting that the WBG and OECD can set the tone.

The UN Paris Summit is expected to agree on efforts to move towards a two-degree Centigrade warming path, or at least introduce concrete changes to energy policy to support a low-carbon life cycle. "The heightened awareness will foster many investment opportunities that are so drastically needed", says Ross. "Action steps and the flexibility to accommodate practical solutions would be an ideal outcome."

The world is at a defining moment, when everyone must effect change. Otherwise, we will face the consequences. As Dickens says, "We are all linked. We have one planet, and we need to work in a coordinated manner." Clear guidance and the right regulatory incentives can help ensure that we can effect this change quickly.



**THERE MUST
BE MORE
INCENTIVES TO
DECARBONISE**

SCOTT DICKENS
Global Co-Head Infrastructure
Financing Group, HSBC



5

INTERNATIONAL MOMENTUM

The international community has pushed ahead with climate finance initiatives through major meetings that will have a lasting impact

FURTHER MOMENTUM COMES from the four major global conferences in 2015: on financing for development in Addis Ababa in July; sustainable development in New York in September; the G20 in Antalya in November; and climate change in Paris in December.

The Third International Conference on Financing for Development in Addis Ababa saw UN members launch a new global financing framework that prioritises sustainable development. Similarly, the Sustainable Development Summit in New York adopted the Sustainable Development Goals (SDGs), including for the first time a goal on ensuring sustainable energy access for all.

The momentum continued at the G20 summit in November, which built on a solid foundation of implementation of past promises. The final compliance report of the G20 Research Group released on the eve of the Antalya Summit showed G20 members had complied with their commitment made the year before at Brisbane to mobilise “finance for adaptation... such as the Green Climate Fund”, at a level of 55%, with their commitment to phase out fossil fuel subsidies at a level of 30% and to support clean energy technology at a level of 95%. In Antalya, G20 leaders received reports on an adaptation finance toolkit for vulnerable countries, a Climate Funds Inventory from the OECD and the G20 Climate Finance Study Group Annual Report, 2015. The leaders asked the FSB “to continue to engage with public- and private-sector participants on how the financial sector can take account of climate change risks.”

For the COP21 in Paris in December and afterwards, the international community will continue to mobilise resources to reach the \$100 billion Copenhagen commitment. The commitment is set to be augmented at Paris, by a still undetermined amount.



The Third International Conference on Financing for Development in Addis Ababa resulted in a new framework for financing sustainable development
ANADOLU AGENCY/GETTY IMAGES

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PATHWAYS TO SUCCESS

With the climate clock ticking and huge sums of money yet to be mobilised to meet the \$100 billion per year commitment, what are the best pathways to success?

THERE ARE FOUR PRIMARY pathways to successfully meeting the climate finance challenge that lies ahead. They draw on proven financial and economic measures that can overcome the constraints, control climate change and make profits. The four primary pathways to success can be combined in different blends to produce the needed result.

1. Top-down public finance

The first pathway relies on UN-led formal multilateral organisations to produce negotiated agreements with legal force, specifying how much each country must contribute for climate finance. It requires progressively more money from national governments' overseas development assistance, debt relief, export finance, and domestic development banks, procurement, sovereign wealth funds, pension plans and state-owned enterprises. It involves new donors from emerging countries and developed countries adding more.

Such a global regime with legal force would define targets, timetables, burden sharing among countries, monitoring, reporting, verification, obligations to correct and penalties for shortcomings. It would set stable global rules that the private sector needs. It would start by identifying at COP21 how the full \$100 billion per year promised in 2009 for 2020 will be raised, governed, managed and deployed, and progressively mobilising more until the sum needed to meet the two-degree goal is reached.

2. Bottom-up voluntary public finance

The second pathway relies on the voluntary bottom-up mobilisation of public finance, led by the world's major governments in the G7, G20, BRICS and similar informal institutions. They would combine, commit, certify and continuously improve climate finance until enough is raised. Pioneering countries and regional groups such as the EU would provide building blocs, prove their solutions work and press others to join. The UN itself relies heavily on this

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PIONEERING COUNTRIES AND REGIONAL GROUPS SUCH AS THE EU WOULD PROVIDE BUILDING BLOCS

”

approach for Paris, by depending on voluntary INDCs and their subsequent implementation.

G20 members could finally comply with their 2009 commitment to end fossil fuel subsidies, and expand it to encompass a broad range of producer subsidies, including the \$88 billion in annual tax preferences G20 members give for fossil fuel exploration. Firms could be regulated or paid not to explore for carbon-rich, likely stranded assets, above all coal. Currently, \$1 trillion is invested annually in fossil fuel extraction and transportation when climate-resilient infrastructure and divestment of carbon-intensive stranded assets are needed. IMF-World Bank lending terms could be adjusted to stop subsidising coal and other highly dirty fossil fuels and to invest in cleaner programmes and infrastructure. The G20 could instruct its task group to provide incentives to financiers. It could also create green trade liberalisation through free trade among its members in environmental goods and services, as the Asia Pacific Economic Cooperation forum has done. Other measures include investing in better batteries, creating a green infrastructure hub and adding more women to the 2010 UN High Level Advisory Group on Climate Change Financing.

3. The private-sector-led competitive and cooperative path

The third pathway relies primarily on the dispersed private sector, with its profit motive and market incentives. Here, private firms lead with their individual actions, primarily through their investment and divestment decisions and creation and use of innovative financial products. Supported by private-sector voluntary standardisation, codes of conduct and corporate responsibility, as well as by lobbying governments, the banking, insurance and asset management industries play a critical role on the front line. Rating agencies, certification and standard setters, conscious consumers, and the green products and services sector provide major support.

4. The sub-national and civil society decentralised path

The fourth pathway focuses on decentralised sub-national and civil society actors. They include NGO coalitions and international institutions such as Oxfam, which lobbies to end coal-fuelled electricity generation. Pilot projects, such as the London congestion charge, and philanthropists also contribute. Divestment campaigns and crowdfunding efforts act at the grassroots level. Consumers pay a green premium for credibly certified goods and services, with the premium going to poor farmers pursuing climate-friendly practices.

G20 compliance with its 2014 commitment to mobilise finance for climate adaptation



Full compliance

Australia
Canada
France
Japan
Korea
Mexico
United Kingdom
European Union



No compliance

Brazil
India
Italy
Russia
Saudi Arabia
Turkey



Partial compliance

Argentina
China
Germany
Indonesia
South Africa
United States

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Sponsorship

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62-68 Rosebery Avenue, London EC1R 4RR, UK

Tel: +44 (0) 20 7650 1600

Fax: +44 (0) 20 7650 1609

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The G20 and G7 Research Groups

Munk School of Global Affairs and Trinity College

University of Toronto, 1 Devonshire Place, Room 209N

Toronto ON M5S 3K7, Canada

Tel: +1 416 946 8953

www.g7.utoronto.ca

www.g20.utoronto.ca

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