Elisabeth Tamara near Nevado Huascaran,the highest mountain in Peru. In this area of Peru, glaciers are retreating, affecting communities who depend on melt water. Photo: Gilvan Barreto/Oxfam GB (2008)

BREAKING THE STANDOFF

Post-2020 climate finance in the Paris agreement

Climate finance is fundamental to a fair and effective global climate agreement. Too few countries have delivered on their obligations. As a result the world's poorest people have not benefitted from the necessary investment, and climate finance has been a major obstacle to achieving a global climate change agreement.

A new approach that recognizes the failings of the current regime and is better informed by needs and opportunities at the national level can break the current standoff and trigger a collaborative effort that delivers effective investment at scale in both mitigation and adaptation. This, along with ambitious emissions reduction pledges by developed countries, is key to success in the 2015 Paris climate negotiations.

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EXECUTIVE SUMMARY

BREAKING THE STAND-OFF

Negotiations are currently under way to develop a new international climate change agreement that will cover all countries and curb global warming to below the internationally agreed limit of 2 degrees. The new agreement will be adopted at the United Nations Climate Change Conference – Conference of the Parties 21, or COP21 – to be held in Paris in November/December 2015, and will be implemented from 2020.

International climate finance – the international support to help developing countries adapt to climate change and enable low-carbon development – must be at the heart of the Paris agreement. It offers the key to unlocking mitigation potential in developing countries and enabling communities to adapt to current and future impacts. It is also a basic building block of a fair agreement: one that accords with countries' relative responsibilities for the problem, and their capabilities to address it.

Yet for too long finance has been branded as a stumbling block, hindering progress at the negotiating table. To be able to commit to low-carbon development pathways, developing countries need the confidence that they will receive adequate and on-going support from developed countries, who need to accept that it is in their own national interests to deliver. But with a new and revitalized approach to the climate finance discussions, negotiators in Lima and Paris can break through this standoff and unlock a brighter future for developing and developed countries alike.

Oxfam proposes a new approach that is guided by the lessons learnt from the failings of the current climate finance regime, as well as by a better understanding of climate finance need and potential at national level. This finance blueprint for Paris for the first time gets down to business in terms of who pays and who receives, and how much.

Lessons learnt from the $100bn regime

The current commitment among developed countries made in Cancun and Copenhagen[1] – to jointly mobilize $100bn by 2020 from a variety of sources to address the needs of developing countries – has exacerbated the climate finance standoff.

The $100bn commitment has become an iconic reference point in global negotiations, haggled over by negotiators and the source of much of the discontent and many of the problems that have dogged climate finance negotiations over the past five years.

Progress in meeting this goal has been too slow. Current climate finance levels have flat-lined since the Fast Start Finance period, and despite recent progress with filling the Green Climate Fund to the bare minimum mark needed to get the new fund up and running, developed countries remain off-track for bringing up climate finance levels to meet their overall promise. One of the reasons for this is

the vague nature of the target itself. Too few details have been agreed by negotiators about how financial flows will be mobilized, which countries will mobilize them and which countries will receive them. This has undermined developing countries' ability to create effective plans for their adaptation and mitigation needs.

There are four key shortcomings of the $100bn approach, where the post-Paris agreement must do better.

1. $100bn is not enough to address the problem. It is too low a target if it is to come from both public and private sources, and too little if it is to be spread between both adaptation and mitigation.
2. Everyone and no-one is accountable. It is a target for all developed countries, meaning that no specific country has committed to a quantified pathway for scaling up towards it. Meanwhile all developing countries are entitled in theory to receive it, but none knows how much it might receive from one year to the next, making planning impossible.
3. There is too little clarity on rules for what counts, especially in terms of private finance: whether money is new and additional; whether loans can be used etc. – making it even harder to hold countries to account for real and comparable increases in finance.
4. Ultimately, it has become an abstract number that Parties fight over in the world of the UNFCCC, which is too far removed from the real business of cutting emissions and supporting vulnerable communities. It is time this changed.

From abstract global numbers to a focus on concrete national needs and potential

Success in Paris will mean negotiating a finance package that recognizes the true scale of the overall challenge – both in mitigation and adaptation – yet is responsive to the needs and specificities in given countries.

This paper puts forward some numbers which indicate the scale of the financing challenge, drawing both on a synthesis of available global estimates, and a close look at existing national-level plans.

For mitigation, Parties should collectively recognize and commit to bridge a mitigation investment gap in the order of several $100bn per year, perhaps in excess of $500bn per year (in both public and private finance). This is the difference between current investment levels and what the latest models estimate is needed to shift the world onto a 2 degrees pathway.

For adaptation, Parties should collectively recognize and commit to bridge the scale of the *public* adaptation finance gap. Adaptation needs will increase the more temperatures are allowed to rise, so the target must be determined based on the mitigation ambition of agreement – for example in a 2ºC agreement, global estimates indicate an additional $60bn per year will be needed by 2050s for sub-Saharan Africa. Developed countries should commit to channel a significant proportion of these funds through the Green Climate Fund.

While a collective commitment to closing this gap is crucial to the Paris agreement, achieving real progress lies in ensuring support at the country level.

Countries should decide in Paris to launch a process to agree country-specific national financing schedules. For developing countries, this means national plans outlining actions and the support required for their implementation. For developed countries, it means detailing what support they will be providing to realize these plans. This paper looks at how these national schedules for both developed and developing countries relate to the collective commitment, how they can fit into the Paris agreement, and how they will be revised over time.

Matching pledges to tangible action in this way can transform climate finance into a tool to trigger a collaborative effort towards unlocking concrete opportunities. A closer reading of country plans shows that if progress is made on climate finance, the clean development that poor countries can achieve could be spectacular. For instance, the Ethiopian government has already spelled out how proper support could lift millions of people out of poverty while avoiding annual emissions equivalent to 65 coal-fired power plants. Indonesia could fulfill its plan to cut emissions by 41 percent in 15 years. And Peru could increase its GDP by nearly 1 percent more than business-as-usual, while halving its emissions at the same time.

This paper shows how the combination of a collective commitment to closing the global financing gap with country-specific national financing schedules for both developed and developing countries may hold the key to breaking the stand-off.

Finance and equity

Much negotiating between now and the Paris COP will focus on the issue of effort sharing. For most industrialized countries, a fair share of the global mitigation effort amounts to far greater emissions reductions than can be achieved solely within their own borders. Furthermore, poorer countries cannot be expected to meet the additional cost of implementing low-carbon development strategies and are entitled to receive support for their mitigation efforts.

Put simply, climate finance is an intrinsic part of the effort-sharing equation. For wealthier countries, contributions under the Paris agreement must include both the Party's commitment to reducing domestic emissions and the support it will provide to low-carbon development in other countries. Similarly, poorer countries must be enabled to indicate progressively the amount of finance they will need to implement their plans.

Oxfam offers one possible framework for calculating fair shares – to benchmark who contributes what and to bring new contributors into the picture. On this basis, a number of countries that have not been expected to contribute resources until now should prepare to step up.

Oxfam's calculation of country 'fair shares' estimates that the US would be responsible for mobilizing 56 percent of the international climate finance needed to shift the world onto a low-carbon path during the first commitment period of the new agreement, followed by 22 percent from the EU and 10 percent from Japan. This would be in addition to the emissions reductions they are responsible for delivering within their own borders. New contributors include Brazil, Singapore, United Arab Emirates, and Kuwait.

When it comes to contributing to international climate finance for adaptation, new countries which should become climate finance contributors including Russia,

Brazil, the Republic of Korea and Mexico. This list of contributors and their shares differ slightly when it comes to contributing towards international adaptation finance, as different considerations are at play. Unlike with mitigation, international responsibilities are not affected by the size of borders and the potential contained within them to reduce emissions.

KEY RECOMMENDATIONS

Oxfam proposes that a successful Paris climate agreement should include a financial package with the following elements:

1. Recognition of the scale of the investment gap and a shared commitment to closing it

No strategy for change is credible unless it is costed. Furthermore, asking developing countries to commit to strong action without a quantitative commitment of support is unrealistic.

2. A system of individual contributions and entitlements captured alongside the agreement

Contributors may face constitutional barriers to making multi-year commitments, and few developing countries have yet identified their individual financing needs. However, a system of dynamic country-by-country financing schedules annexed to the agreement can circumvent these constraints, provide the necessary predictability, identify opportunities and continually build cooperation and collaboration between contributors and recipients.

3. A separate collective target for public finance for adaptation

Experience to date has clearly demonstrated that only a separate public finance target for adaptation is likely to close the adaptation finance gap.

4. Both top-down and bottom-up methods

The collective commitment must be firmly grounded in the science. And if ambition on mitigation is too low, this must trigger greater support for adaptation. Bottom-up national-level plans, put forward between 2015 and 2020, are needed to identify opportunities, inform negotiations on financing schedules and drive an upward spiral of greater ambition.

5. A fair shares system

Without guidance on how much countries should contribute or what they are entitled to receive, there is little prospect of real progress. Separate frameworks should be established for mitigation and adaptation, both based on the principles of the UNFCCC.

6. Robust accounting

At a minimum, this means limiting the proportion of finance provided as loans, counting only the grant equivalent of loans and finding a definition of ‘new and additional’ that will stick.

7. New commitments to establishing innovative sources of public finance

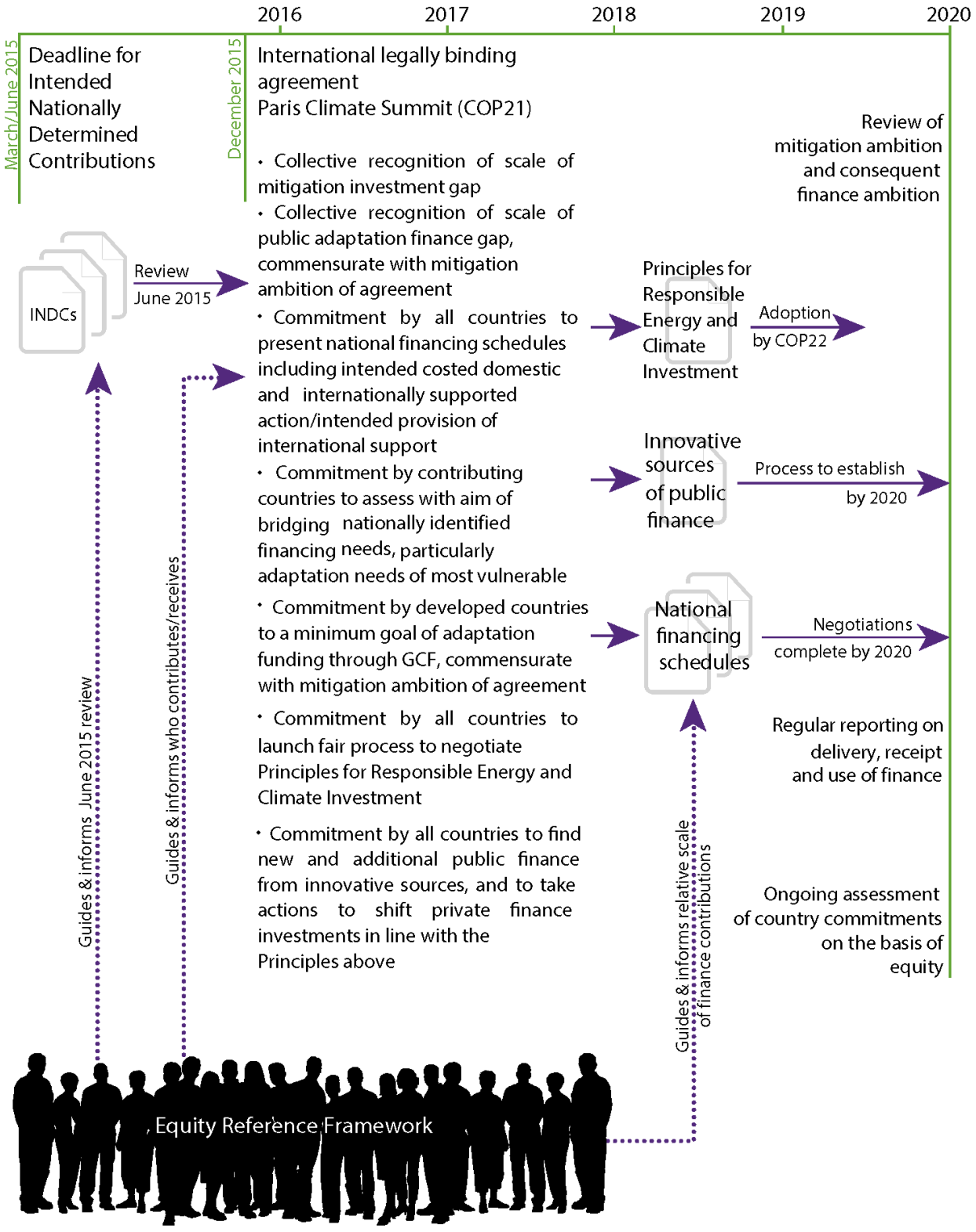
There can be no more shift in current ODA flows to climate finance, and greater reliability and predictability are needed. Put simply, new sources of public finance are needed and Parties must make an action plan aimed at getting the most

promising national and international schemes off the ground.

8. New commitments to shifting private finance

Far more can and must be done to help channel private investment. Parties should capture in the Paris agreement the principles, commitments and safeguards necessary to unleash investment in equitable low-carbon solutions.

Figure 1: Finance in the Paris agreement: visualizing Oxfam's key recommendations



1 THE CHOICES

Success in Paris in 2015 means unlocking the maximum potential for mitigation in all countries and ensuring adequate support for adaptation. To achieve these goals, the Parties will need to agree a robust and fair set of finance commitments as part of the Paris agreement.

The following sections lay out systematically the key choices that now face government negotiators, relating to both quantitative and qualitative commitments on finance for the post-2020 regime. For arrangements to be fair, to accord with the science and to build sufficient trust and confidence between Parties, negotiators will need to take on board a number of key lessons from the $100bn Copenhagen/Cancun commitments.

QUANTITATIVE COMMITMENTS

A. Collective or individual contributions and entitlements?

Learning from the $100bn commitment

The $100bn Copenhagen agreement was a collective target applied to all developed countries, with all developing countries being eligible to receive resources. However, this arrangement has meant, firstly, that no developed country can be held to account for delivering any particular share of the total. As a result it has proved a major challenge to establish a clear pathway to reaching the collective target, and available data indicates that developed countries have failed to collectively scale up their public finance contributions towards the $100bn goal beyond the levels reached under the Fast Start Finance (FSF) period of 2010–12.[2]

Secondly, the arrangement has meant that no developing country can be certain of what level of resources it might expect to receive. This has hindered the predictability of finance – a key principle in ensuring effective use of climate finance resources.[3] There has also been a disproportionate flow of funds to certain countries at the expense of others.[4]

Learning from these lessons, Parties should consider alternative options, drawing on examples from financing commitments in other international settings, as set out in Table 1A.

Table 1A: Collective or individual contributions and entitlements?

		Contributions		
		A single collective contribution	***Individual, country-specific contributions***	***Hybrid****
Entitlements	***Overall developing country entitlement***	E.g. the Copenhagen/ Cancun $100bn commitment	E.g. L'Aquila Food Security Initiative, in which qualitative contributions from specific countries were made to an unspecified list of developing countries[5]	
	Individual country-specific entitlements	E.g. National Adaptation Plans of Action (NAPAs), in which a collective commitment was made by developed countries to fully fund individual country-specific adaptation needs, as identified by those countries	E.g. G8 Gleneagles aid commitments, which included a commitment to $50bn specifically for Africa, with each G8 country to contribute a specified amount[6]	
	Hybrid **			**See Oxfam's choice, outlined below**

***** A collective contribution target in the legal agreement, individual contributions in a separate document.

** Collective entitlement in the legal agreement, individual entitlements in a separate document.

Oxfam's choice

The agreement must recognize the scale of the overall investment challenge (across all countries) and the amount that must be met through international support.

Oxfam proposes that the Paris agreement should include both a collective contribution/entitlement enshrined in the legal agreement itself, *and* a system of individual contributions and entitlements captured in a complementary form outside of the core agreement.

Some form of collective contribution/entitlement is vital, as there must be clarity on the overall scale of finance required to meet the agreed 2°C goal and adaptation needs, and a clear commitment to it being provided, which should be captured in the core and legally binding international agreement. Some developed country Parties are seeking to backtrack from any reference at all to quantitative or numerical finance commitments. But offering an agreement in Paris without any finance numbers to support developing countries to transition to and remain on a low-carbon path is unrealistic. Unless financial commitments are made upfront, there is very little reason to believe that they will be forthcoming later. The bare minimum that developing countries should expect is recognition of the scale of the financing challenge and a specific collective commitment to address it.

However, the Copenhagen experience shows that a collective commitment alone is not enough. Many developed countries face legal or constitutional barriers to making individual, multi-annual budgetary commitments under a legally binding international agreement. Concurrently few developing countries are yet in a position to clearly and strategically identify their core financing needs – for either ambitious low-carbon pathways or adequate climate-resilient ones.

As a result, Oxfam proposes that country-specific contributions and entitlements should not be included in the core international agreement due to be struck in Paris. The Paris agreement would, however, include a collective commitment for shifting financial flows globally and would set specific targets for contributing countries related to the provision of support. It would also include a process for country-by-country financing schedules to be annexed to the agreement between 2015 and 2020. Contributing countries would provide details of the types, levels and instruments of finance they aim to provide and mobilize. Developing countries would set out how they would scale up their ambitions, subject to the international support available. A first iteration of these schedules would be adopted in 2020 with a subsequent, iterative process to enhance both schedules. These would not be legally binding and could contain necessary caveats for contributing countries – such as 'subject to parliamentary approval' – but would nonetheless offer greater predictability of financing for recipient countries.

Such an approach will also allow the agreement to respond constructively to the challenge of determining the scale of quantitative finance commitments, and how much individual countries should be entitled to receive – assessed under choices C and D below.

B. A single target?

Learning from the $100bn commitment

The Copenhagen/Cancun $100bn agreement was a catch-all target intended to cover both mitigation and adaptation (as well as REDD-plus, technology development and transfer, and capacity building), derived from 'a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance'.[7]

This typically vague formulation may have allowed decisions to be reached in Copenhagen and Cancun, but it sowed the seeds of years of argument and contestation. Rather than constructive ambiguity, it is an approach that has led to a destructive antipathy and one that should be avoided going forward.

More specifically, the lack of clarity over the division of resources to come from public and private sources has meant that contributing countries have been able to evade any accountability for their flat-lining – and in some cases declining – public finance contributions, as they have progressively sought to shift the focus onto private flows.[8] While private finance is clearly central to meeting the climate challenge, the need for substantial public resources is undeniable for both mitigation[9] and adaptation,[10] and a failure to specify the amount of public finance needed has simply meant that not enough is flowing. Furthermore, the suggestion that a combined $100bn of private and public finance is sufficient substantially understates the overall investment challenge.

Meanwhile, the lack of clarity over the balance to be struck between resources for adaptation and mitigation has served to perpetuate the longstanding gap in adaptation financing, in which the lion's share of resources continues to flow to mitigation rather than adaptation (and primarily to middle-income rather than the poorest countries as a result).[11] This is in spite of the FSF commitment calling for a 'balanced allocation between mitigation and adaptation'[12] and recent COP decisions which have called on developed country Parties to 'channel a substantial share of public climate funds to adaptation activities'.[13]

Learning from these lessons, Parties might consider alternative options for setting more disaggregated qualitative targets, as set out in Table 1B.

Table 1B: Adaptation/mitigation and public/private – a single target or disaggregated targets?

		Public/private		
		Mixed, no guidance on balance	***Mixed, guidance on balance***	***Separate targets***
Adaptation/mitigation	***Mixed, no guidance on balance***	E.g. Copenhagen Accord/Cancun Agreements, in which $100bn/year was committed from both public and private sources, for both adaptation and mitigation		E.g. the establishment of the G8 New Alliance for Food Security and Nutrition in 2012 included the target of securing Letters of Intent from private sector companies to 'invest over $3 billion across the agricultural value chain in Grow Africa countries', alongside a 'goal of securing commitments of $1.2 billion over three years' primarily from public donors for the Global Agriculture and Food Security Programme (GAFSP)[14]
	Mixed, guidance on balance	E.g. Fast Start Finance (FSF) commitment in which $30bn over three years was committed, with a requirement that it should be 'balanced between adaptation and mitigation'. While no formal *de jure* guidance was given with regard to the balance between public and private finance, the commitment was widely interpreted *de facto* to entail 100 per cent public finance	E.g. the Green Climate Fund (GCF) Executive Board has set a target of a 50/50 balance between adaptation and mitigation over time[15]	E.g. FSF commitment in which $30bn over three years was committed, with a requirement that it should be 'balanced between adaptation and mitigation'. While no formal guidance was given with regard to the balance between public and private finance, the commitment has been widely interpreted *de facto* to entail 100 per cent public finance
	Separate targets	**See Oxfam's choice on mitigation**		E.g. National Adaptation Programmes of Action (NAPAs) in which developing countries made an adaptation-specific commitment to public finance **See Oxfam's choice on adaptation**

Oxfam's choice

Oxfam proposes that the Paris agreement should include a separate collective target for public finance for adaptation and a separate collective target for closing the global investment gap in mitigation (which requires finance from a mix of public and private sources), which could include a sub-target for the provision of public finance from contributing countries.

Unlike with mitigation, the vast majority of adaptation efforts need public financing, because – among other reasons – the measures required, such as flood defences or national disaster planning, do not generate returns and the communities in need are often rural, poor and of no interest to the private sector.[16] That said, there are various ways in which the private sector can support adaptation:[17] for instance, the capital market can be used to frontload pledges from donor governments via bonds. However, a public-only adaptation finance target is needed to incentivize adaptation finance.

A separate public finance target for adaptation is the only guaranteed means of closing the adaptation finance gap. This gap is recognized by the Intergovernmental Panel on Climate Change (IPCC), and US Climate Envoy Todd Stern has recognized the need to increase public finance for adaptation.[18] The impacts of climate change are already being felt by communities in developing countries and will increase.

Efforts to date to achieve an increase in international support to adaptation by giving guidance – such as in the FSF decision – on the need for an unquantified 'balance' with mitigation have failed. As the Green Climate Fund (GCF) Board has recognized, only a quantified commitment to a 50/50 balance[19] or, better still, a separate target for adaptation will do the job.

The agreement also requires a separate collective goal for mitigation finance. To be credible, any agreement that aspires to catalyse a rapid and large-scale shift to a low-carbon economy must recognize the scale of the challenge. No signals will be sent to the private sector without numbers that identify the scale of the transformation sought. At a minimum, this means recognition of the total investment needs for a pathway consistent with meeting the agreed 2°C goal – let alone the 1.5°C goal rightly demanded by many developing countries – globally and in developing countries, and a commitment to close this gap.

However, while it is challenging to determine exact needs, public finance will have to remain a key component of the climate finance architecture in the new agreement. The setting of a sub-target for public finance for mitigation could be considered, even though such a target would have to be somewhat political and would require regular review on its adequacy and to reflect changing circumstances over time. Also, the exact composition of finance provided and mobilized will depend on national circumstances in recipient countries, and so should be largely determined through the process of agreeing country-by-country financing schedules for both developed and developing countries between 2015 and 2020, to be annexed to the agreement. In this way, the most appropriate and strategic mix of financing tools can be deployed and targeted at unlocking specific low-carbon opportunities in particular countries. This approach is further elaborated in relation to choice C below.

C. Top-down or bottom-up numbers?

Learning from the $100bn commitment

The scale of the Copenhagen/Cancun $100bn agreement was determined essentially on a political basis, although it was influenced to some extent by available top-down scientific or academic estimates of the costs of adaptation and mitigation in developing countries.

Two problems have arisen as a result of this approach. Firstly, the political agreement moved too far away from available top-down studies, so that the resulting scale is significantly lower than what is needed. Only if the $100bn was to come solely from public finance and be solely for adaptation would it approach the order of magnitude indicated by most available top-down studies. The order of magnitude for shifting private finance for mitigation is many times higher than $100bn per year, as assessed in section 2 below.

Secondly, even if political agreement had been reached with closer reference to the evidence available at the time, any approach to establishing the scale of finance needs based on top-down studies is necessarily crude. By their nature, top-down methodologies rely on significant assumptions, which can alter the resulting estimates quite substantially and they change over time as we learn more about the challenges to be faced and overcome.

But perhaps more significantly, framing the finance debate in a global top-down manner has tended to result in negotiations on a somewhat abstract global figure that bears little relation to actual needs and opportunities on the ground. It has produced a negotiating climate in which climate finance is treated more as a negotiating chip in a tit-for-tat deadlock between rich and poor countries than as a practical tool for unlocking concrete action in countries and catalysing an upward spiral of ambition.

Learning from these lessons, Parties might consider alternative options for determining the scale of finance needs to be captured in an agreement, as set out in Table 1C.

Table 1C: Top-down or bottom-up numbers?

	Top-down, politically determined	***Top-down, science-based***	***Bottom-up***	***Hybrid****
Adaptation	E.g. Copenhagen Accord/ Cancun Agreements: a mixed adaptation/ mitigation commitment	E.g. Africa Group proposal for a science-based, long-term goal for adaptation finance, linked to temperature targets[20]	E.g. Paris agreement could determine adaptation finance commitments based on National Adaptation Plans (NAPs)	**See Oxfam's choice**
Mitigation	E.g. Copenhagen Accord/ Cancun Agreements: a mixed adaptation/ mitigation commitment	E.g. The Climate Equity Reference Project: proposal for international mitigation finance obligations[21]	E.g. Paris agreement could determine mitigation finance commitments based on Intended Nationally Determined Contributions (INDCs)[22]	**See Oxfam's choice**

* Collective targets set according to science-based top-down estimates, country action and financing schedules based on bottom-up plans

Oxfam's choice

Oxfam proposes that the Paris agreement should base the numbers for the collective goal of closing the global finance gap for mitigation, and the collective goal for adaptation finance from public finance, on science-based top-down estimates, of the kind referenced in section 2 of this paper. Alongside this, bottom-up national-level plans to be put forward by developing countries between 2015 and 2020 should form the basis of ongoing negotiations on the country-specific financing schedules suggested above.

This kind of hybrid approach is a means of providing a more accurate sense of the scale of global financial shifts required over the medium term, while also helping to move the finance debate at the UN more firmly towards a constructive dialogue between countries that will unlock specific action on the ground.

Importantly, part of setting a more accurately science-based global public finance goal for adaptation should involve a mechanism whereby lower ambition in the agreement on mitigation should result in higher ambition on adaptation finance. This idea has been proposed by the Africa Group, which calls for an adaptation finance goal based on a scientific assessment of the adaptation costs associated with different rises in temperature.[23]

Building bottom-up plans into the identification of financing costs is also an important means of determining the scale of individual entitlements, by ensuring that they reflect to some extent the ambition of plans put forward by developing countries, encouraging a spiral of greater ambition. This approach is further elaborated in relation to choice D below.

Box 1: Defining 'top-down' and 'bottom-up'

For the purpose of this paper, 'top-down numbers' means a macro (global) analysis based on 'big picture' trends. Examples include the Global Greenhouse Gas Abatement Cost Curve developed by McKinsey & Company.[24]

'Bottom-up numbers' refers to analysis conducted at the national level to determine costs for a particular country, usually with regard to the specific conditions in that country. These bottom-up numbers may be expressed individually or combined and extrapolated to produce an alternative global figure.

D. Who pays and who receives?

Learning from the $100bn commitment

Under the Copenhagen/Cancun $100bn agreement, 'developed countries' were due to contribute financial resources and 'developing countries' were entitled to receive them. No more specific definition was given for these groupings nor, more significantly, was any system of effort sharing established that would determine the relative contributions of individual developed countries or the relative entitlements of individual developing countries.

As a result, and as assessed under choice A above, developed countries have largely been able to evade accountability for any specific share of the $100bn collective target, and no developing country has been able to make plans on the basis of predictable, reliable finance flows.

What is more, establishing who pays and who receives on the basis of categories of developed and developing countries, corresponding *de facto* to the Annex I/Non-Annex I distinction of the UNFCCC (for the sake of the $100bn commitment) or the Annex II/non-Annex II distinction (for the sake of a legal obligation to provide financial support), has meant that some countries with levels of responsibility and capability comparable to those of developed countries, including Singapore, the United Arab Emirates, and Qatar, have avoided any financial contribution. Instead of increasing the pressure on developed countries to contribute, this lack of an objective basis for determining fair shares has instead allowed these countries to avoid the scale of contributions that should be expected of them. A system in which each developed country determines how much it is prepared to contribute has meant insufficient resources being mobilized overall.

Learning from these lessons, Parties might consider alternative options for determining who pays and who receives climate finance in the post-2020 regime. Some new approaches have started to emerge in the climate regime since Copenhagen. For example, some larger developing countries opted to voluntarily forego receiving any Fast Start Finance, and some developing countries recently opted voluntarily to contribute to the GCF.[25] Further new approaches have been proposed, meaning that a variety of options could be considered by Parties, ranging from a complete shift to new, objectively determined equity regimes to more gradual means of encouraging new contributors of finance and prioritized recipients of finance, as set out in Table 1D.1.

Table 1D.1: Who pays and who receives?

		Who contributes?			
		Developed countries only	***Developed countries and developing countries voluntarily ('in a position to do so')***	***Developed countries and developing countries through a South–South fund***	***Developed countries and developing countries according to an equity framework***
Who receives?	***All developing countries***	E.g. Copenhagen Accord/ Cancun Agreements *De jure:* formerly any developing country was entitled to receive financing			
	All developing countries, but guidance on which should be prioritized	E.g. Fast Start Finance Gives guidance that Least Developed Countries (LDCs), Small Island Developing States (SIDS) and Africa should be prioritized	**See Oxfam's choice for adaptation**	E.g. proposal for a South–South solidarity fund[26]	
	All developing countries, but some opt out voluntarily	E.g. Fast Start Finance *De facto:* some large developing countries opted to forego receiving any financing	**See Oxfam's choice for adaptation**	**See Oxfam's choice for adaptation**	**See Oxfam's choice for mitigation**
	Developing countries that are eligible according to an equity framework	E.g. the model proposed in Oxfam's 2009 report 'Hang Together or Separately'[27]	**See Oxfam's choice for mitigation**		E.g. the 'Mexican proposal':[28] all countries contribute according to Common but Differentiated Responsibilities and Respective Capabilities (CBDRRC), all countries receive according to CBDRRC, meaning that some countries are net contributors, some are net receivers

Oxfam's choice

Oxfam proposes that an assessment of Intended Nationally Determined Contributions (INDCs) should be carried out during 2015, to assess their fairness, adequacy and consistency with keeping global temperature increases below 2°C

while maintaining a reasonable chance of keeping warming below 1.5°C. The assessment should be informed by an objectively determined equity reference framework based on indicators showing cumulative responsibility for emissions, capability to act, development need and adaptation need. Since the provision of climate finance is part of the fair share of the global effort for highly capable and highly responsible countries, the equity reference framework can also be used to determine adequate levels of climate finance to be provided, as well as entitlement to receive mitigation and adaptation finance. Against such benchmarks, countries can determine the scale of their contributions and developing countries can determine whether to opt to make contributions and at what scale; whether to opt out from receiving finance; and what level of financing they might reasonably expect to be entitled to receive.[29]

Separate equity reference frameworks for determining adequate levels of finance by individual countries should be established with respect to mitigation and adaptation finance, though both should relate to the core principles of the UNFCCC.[30]

While the equity reference framework could become part of the Paris agreement and thus give a legal standing for the principles and indicators by which countries would define ambition and fairness, the resulting fair shares of international climate finance to be provided could sit outside of the formal agreement. The equity reference framework should be used to guide the submission of INDCs, as well as their *ex ante* assessment, which could be led by the UNFCCC secretariat at a planned intercessional workshop in Bonn in June 2015 and recorded in a report from the workshop, for example. Alternatively, assessment could be carried out by civil society and presented to governments at an alternate workshop.

Fair shares of mitigation finance

With regard to mitigation, Parties should determine the fair shares of all countries of the global effort needed to ensure a strong chance of limiting average temperature increases to below the 2°C goal agreed at Copenhagen/Cancun, and to keep open the possibility of limiting it to 1.5°C.These fair shares should be based on indicators of responsibility for emissions and capacity to pay. While different assumptions can certainly be justified, Oxfam maintains that reasonable indicators include a country's cumulative emissions since 1990 and the income accruing to its population living above a development threshold, such as $9,000 per annum per capita and weighted progressively thereafter.[31]

The resulting fair share of the necessary global emissions reductions for some countries, not least those outlined in Annex I of the UNFCCC, may be too large to deliver through domestic action alone. Those countries will need to deliver a portion of their fair share through international mitigation financing of emissions reductions in developing countries. Conversely, those countries whose fair share of the global mitigation effort is less than the available domestic mitigation potential would be entitled to receive international mitigation finance to deliver additional emissions reductions over and above their fair share.

Table 1D.2 sets out indicative – not prescriptive – fair shares of the global mitigation effort for 2020–25 (assumed to be the first commitment period of the new agreement): countries' respective domestic emissions reductions, remaining

reductions to be achieved through international mitigation finance, and their resulting relative shares of the mitigation effort to be delivered through international mitigation finance.

Table 1D.2: Indicative fair shares of mitigation effort and finance by 2025
* = new contributors

Country[1]	**Indicative fair share of global mitigation effort (Responsibility and Capability Index score, %)**[2]	**Indicative total mitigation contribution below baseline emissions (Mt CO_2e)**	**Indicative domestic emissions reductions (Mt CO_2e)**[4]	**Indicative internationally supported emissions reductions (Mt CO_2e)**	**Indicative share of internationally supported emissions reductions effort (%)**
United States	39.33%	13,708	4,526	9,182	56%
EU 28	18.76%	6,539	3,007	3,532	22%
Japan	7.16%	2,496	869	1,627	10%
Canada	3.02%	1,052	541	511	3.1%
Australia	2.52%	878	411	467	2.9%
Switzerland	0.80%	279	45	234	1.4%
Norway	0.78%	272	47	226	1.4%
*Brazil[3]	2.46%	856	714	142	0.87%
*Singapore	0.38%	133	15	118	0.72%
*UAE	0.75%	260	173	87	0.53%
*Kuwait	0.60%	210	166	44	0.27%
*Israel	0.33%	115	75	39	0.24%
New Zealand	0.23%	79	51	27	0.17%
*Qatar	0.79%	274	253	21	0.13%

NOTES

1. Countries whose indicative share of internationally supported emissions reductions is less than 0.1% are not included in this list.
2. We have based the Responsibility and Capability Index on each country's cumulative emissions since 1990 and the income accruing to its population living above a development threshold of $9,000 per annum, and weighted progressively thereafter.
3. Brazil is included in the list, though we recognize that it is a marginal case. Further, that owing to a large potential for domestic mitigation, the inclusion of Brazil as a contributor to international mitigation finance may be debated. As stressed, this list is indicative only.
4. The country's level of income, and therefore the variety of low-cost mitigation options available to it, has been taken into account in determining an appropriate rate of domestic emissions reductions.

These numbers were prepared with assistance from the *Climate Equity Reference Project.* Further details, including precise parameters used in the calculation are provided in the endnotes. [32]

Fair shares of adaptation finance

With regard to international adaptation finance, Parties should determine which countries should contribute, their respective fair shares and which should be entitled to receive funding, based on indicators of capacity to pay, responsibility for emissions and vulnerability to climate change impacts. Oxfam suggests a four-step process.

Firstly, all countries should be classified according to at least three core indicators related to their capacity to pay for international adaptation needs. Capacity indicators are vital as a first threshold for identifying contributing countries, because no country should be contributing to international adaptation needs when doing so would compromise its potential to reduce poverty at home. Oxfam's proposed indicators would create a triple-lock to ensure that this would not happen, as follows:

- Countries should have per capita income (for those citizens above a $9,000 development threshold) equal to or higher than the lowest ranking country currently expected to contribute to international adaptation finance. We have taken this country to be Bulgaria, which has the lowest per capita income (above the threshold) among EU countries. (While not an Annex II country, Bulgaria's membership of the EU and of the developed world, and hence inclusion in the $100bn commitment, means it can reasonably be counted as a contributor, accepting that its contribution will be very small.)
- Countries should have a Human Development Index (HDI) score in the 'high' or 'very high' category.
- Countries should have the capacity for redistribution sufficient at least to eliminate extreme poverty, for example by imposing a marginal tax rate on citizens who are not poor by rich country standards to close the poverty gap in that country.[33]

Secondly, fair shares for the resulting list of countries should be determined according to the same indicators for responsibility and capacity as those suggested for determining fair shares of the global mitigation effort above.

Thirdly, the resulting fair shares should be adjusted to take account of the vulnerability of countries to climate change impacts. This is an important step because countries with comparable levels of responsibility for emissions and capability to pay may nonetheless have quite different levels of vulnerability to climate change themselves.

Finally, the resulting list of potential contributors to international adaptation finance should be separated into current and new contributors. Separate targets should be established for each grouping, and their global fair shares adjusted to reflect their share of their group target. At a minimum, the target for the group of current contributors should be included as the collective public adaptation finance goal in the legal agreement.

The target for new contributors may be determined voluntarily among them, and may be recorded in the new agreement or outside of it, with resources flowing either through the current financial mechanism or through a new South–South fund. However, it is important that the target for new contributors should reflect additional finance over and above what the current contributors are required to pay.

This separation into groups of current and new contributors – albeit with individual fair shares based on global indicators that are applicable to all – is needed to reflect the fact that developed countries have consistently failed to keep their promises to provide scaled-up, adequate, predictable, new and additional financial support to developing countries under the UNFCCC. As a result, any new contributors should not be required to make up the shortfall for declining contributions from developed countries, but rather should mobilize further additional adaptation support for Southern countries.

On this basis, Table 1D.3 outlines indicative, not prescriptive, fair shares of international adaptation finance.

Table 1D.3: Indicative fair shares of adaptation finance

Country[1]	**Step 1: Capacity ($ per capita income above $9,000 only)**	**Step 2: Responsibility and Capacity Index score (RCI)**[2]	**Step 3: RCI adjusted for vulnerability**[3]	**Step 4: Fair shares for current and new contributors**
Current contributors				
USA	57,148	45.90%	45.99%	**53.05%**
EU	average = 32,524; Bulgaria = 19,546	22.44%	22.93%	**26.63%**
Japan	38,111	8.85%	8.42%	**9.72%**
Canada	43,077	3.50%	3.61%	**4.16%**
Australia	42,635	2.84%	2.82%	**3.25%**
Norway	66,525	1.01%	1.09%	**1.26%**
Switzerland	56,695	1.03%	1.05%	**1.21%**
New Zealand	32,176	0.26%	0.27%	**0.32%**
				100%
New contributors				
Russian Federation	25,765	2.51%	2.53%	**18.81%**
Brazil	25,239	2.51%	2.48%	**18.44%**
Republic of Korea	37,670	1.53%	1.54%	**11.44%**
Mexico	25,318	1.09%	0.97%	**7.18%**
Saudi Arabia	56,019	0.87%	0.85%	**6.32%**
UAE	59,252	0.82%	0.76%	**5.68%**
Qatar	125,232	0.69%	0.69%	**5.12%**
Kuwait	82,879	0.64%	0.65%	**4.85%**
Turkey	23,398	0.58%	0.55%	**4.12%**

Singapore	78,846	0.45%	0.47%	**3.45%**
Venezuela	22,408	0.45%	0.45%	**3.35%**
Israel	35,532	0.35%	0.35%	**2.61%**
Chile	30,244	0.31%	0.30%	**2.26%**
Colombia	23,847	0.26%	0.24%	**1.76%**
Malaysia	28,884	0.24%	0.22%	**1.62%**
Iran	20,308	0.19%	0.16%	**1.22%**
Oman	50,256	0.14%	0.13%	**0.95%**
Libya	31,959	0.12%	0.11%	**0.81%**
			Total	**100%**

NOTES

1. Countries whose Responsibility and Capacity Index score adjusted for vulnerability is below 0.1% are not included in this list.
2. We have based the Responsibility and Capability Index on each country's cumulative emissions since 1990, and the income accruing to its population living above a development threshold of $9,000 per annum and weighted progressively thereafter.
3. The adjustment for vulnerability is performed using data from David Wheeler's 2011 study 'Quantifying Vulnerability to Climate Change: Implications for Adaptation Assistance'[34]

A detailed description of the calculations behind these indicative numbers is provided in the endnotes.[35]

To ensure that the poorest and most vulnerable countries do not lose out as a result of their lower capacity to develop and submit such plans, two further steps are needed. Firstly, the formulation adopted in the Cancun Agreements should be continued, in which LDCs, SIDs and African countries should be prioritized for adaptation financing. Secondly, and as a further incentive to bring forward their plans, the international agreement could include a collective commitment from developed countries to at least match the public resources that these developing countries have themselves allocated to adaptation domestically.[36] However, it would need to be clear that this commitment to match-funds represents an absolute minimum from developed countries and would need to be formally increased over time.

E. What counts?

Learning from the $100bn commitment

Under the Copenhagen/Cancun $100bn agreement, little progress was made on establishing clear accounting rules to guide what could and could not be counted as a contribution. The lack of agreed accounting rules has been particularly problematic in three areas: how to define contributions as 'new and additional'; how to account for loans; and how to account for private finance.

The result has been, firstly, that too many countries have sought to redirect or re-label existing official development assistance (ODA) flows, or just to recycle commitments already made in the past. Secondly, some countries have relied extensively on loans, including concessional loans, to make their contributions;

and with no clarity on how they should be accounted for, some have counted the full face value of concessional loans (i.e. including the money that will be paid back to them, rather than just the contribution from the government budget to make the loan concessional). Thirdly, with no agreed means of accounting for private finance flows, countries have been able to use whatever means they choose to claim that private sector financial flows have been 'mobilized' and can therefore be counted as a contribution. This is dangerous accounting, and renders the $100bn pledge meaningless – as the total could very quickly and easily be reached, crowding out indispensable public funds as a result.

Learning from these lessons, the Parties might consider alternative options for the Paris agreement. These might, for example, provide guidance on the proportion of total contributions that could be made in the form of loans, on how to account for concessional loans and/or on whether and how contributions should be defined as 'new and additional', as set out in table 1E below.

Table 1E: What counts as a finance contribution?

		Grants or loans?			
		Grants only	***Grant equivalents only***	***Guidance on % as loans***	***No guidance/limit on loans***
New and additional?	***No reference to 'new and additional'***				E.g. Copenhagen Accord/Cancun Agreements
	Countries provide own definition			E.g. GCF Board decision	E.g. FSF commitment
	Not previously announced				
	Additional to 0.7% target for ODA	E.g. consistent with Denmark and Sweden's contribution to FSF			
	Additional to a base year				
	Part of ODA budget which is rising at least at same rate				E.g. consistent with Australian contribution to FSF

Oxfam's choice

Oxfam proposes that, at a minimum, the Paris agreement should provide guidance on the maximum proportion of financial contributions in the form of loans from any one Party towards both adaptation and mitigation; clarifies that

only the grant equivalent of loans should be counted as a contribution (including no loans for adaptation); and clarifies once and for all a definition of 'new and additional' that will stick.

The GCF Executive Board has already shown the way with regard to limiting the proportion of contributions in the form of loans, and this precedent should now be extended to the finance commitments under the post-2020 regime. As is the practice in accounting for ODA under OECD Development Assistance Committee (DAC) rules, only the government contribution to make the loan concessional should be counted.

Oxfam, along with many others, has long argued the importance of establishing a clear definition of 'new and additional', and pointed out the dangers that arise in the absence of such a definition.[37] The principle that commitments under the UNFCCC should be accounted for separately from existing commitments to reach 0.7% gross national income (GNI)/ODA (such that climate finance comes on top of ODA commitments and does not displace them) remains the gold standard for considering climate finance to be genuinely new and additional.

However, if this definition cannot be agreed among the Parties to the UNFCCC, as has proved to be the case over the past 20 years, then an alternative should be sought. The bottom line should be that any increase in climate finance must not come at the expense of total ODA spending. If climate finance is accounted for as ODA, it should only be considered new and additional if it is part of a rising overall aid budget and is rising at least at the same rate.

As regards accounting for private finance, while proper guidelines on measuring and reporting are being developed, Oxfam proposes a strict ring-fencing of what can be counted by governments as a public contribution. If public money is used to mobilize private finance, only the public part should be eligible to be counted as a government contribution – not the full face value of the total mobilized investment. Likewise, investments that are mobilized more indirectly through a broader concept of government intervention (such as through setting the right policy frameworks) should not be counted as public finance.

QUALITATIVE COMMITMENTS

F. What commitments to policy action should be captured in Paris?

Learning from the $100bn commitment

The Copenhagen/Cancun $100bn commitment had little if anything to say about additional policy actions committed to by governments to help mobilize and redirect additional financial flows for low-carbon and climate-resilient development. No real qualitative commitments to policy action were made.

This lack of any detail on policy tools available to governments has essentially meant that an opportunity has been missed to secure the deeper changes to the global economy needed, and has served to almost nullify the $100bn goal.

As Christiana Figueres, Executive Secretary of the UNFCCC, has noted, the $100bn goal must not be seen as the end point of the fight against climate change, which requires a far more substantial economic and financial transformation, in the order of trillions of dollars: '$100 billion is basically the tail that needs to wag the dog. That $100 billion, the only thing that that is going to do is take the dog and point it in the direction that we must move because we know that the financing we need is not $100 billion per year – it is $1 trillion per year, and that is what needs to be mobilized.'[38]

As a result, Parties might consider alternative qualitative commitments that could be made in the Paris agreement. Options should be considered relating to mobilizing both public and private finance, and at both international and national levels, as set out in Table 1F.1 below.

Table 1F.1: What commitments to policy action should be captured in Paris?

	Private finance	**Public finance**
International actions	E.g. Paris agreement could include agreement on new international principles for responsible energy and climate finance; see PRECI proposal in Box 2 below	E.g. Paris agreement could include commitments to establish mechanisms to generate international public finance, such as from bunker fuels, etc.
Domestic actions	E.g. Paris agreement could include commitments to remove export credits for coal	E.g. Paris agreement could include commitments to generate additional public finance for climate action (at home for developing countries; partially abroad for developed countries), such as from carbon taxes, financial transaction taxes (FTTs), ending fossil fuel subsidies

Oxfam's choice

Oxfam proposes that the Paris agreement should include new commitments to policy action – at both national and international levels – that will establish innovative new sources of public climate finance and new principles or standards to govern private finance flows for energy- and climate-related investments.

Oxfam has long campaigned for new and innovative sources of public finance to be established at national and international levels. These mechanisms can both help prevent the alarming shift in ODA to climate finance and give greater reliability and predictability of finance flows to recipient countries.

Since last year, there have been important developments which have revitalized the debate about alternative finance sources. Many countries have put in place new, innovative financing mechanisms at national level. Table 1E.2 below lists some of the leading proposals and where they have been implemented, or how far they have progressed.

The Paris agreement should include an action plan towards establishing the most promising financing mechanisms at national and international levels. Parties should submit their ideas in this regard as part of their submissions of INDCs at the start of 2015. Further progress may be made in the context of the June 2015 Addis Ababa conference on Financing for Development.

Table 1E.2: New sources of public finance

	Proponents	Status	Potential $
Innovative sources of public finance that governments can pursue unilaterally, and collect nationally.			
Domestic carbon taxes (will be a new source of revenue for national budgets, unless otherwise decided by governments)		Many countries and regions[39] have or plan carbon taxes/ETS to raise revenues for national budgets. South Korea plans to recycle ETS revenues for domestic climate action through a dedicated Green Fund[40]	
EU ETS Auction Revenues – including EU aviation scheme (can create a dedicated new revenue stream distinct from national budgets)	Germany, Finland, Lithuania[41]	EU countries reported spending 87% of ETS revenues (€3bn) on climate action at home and abroad last year.[42] Several countries reported spending a percentage on international climate finance for developing countries (e.g. Finland and Denmark 50%; the UK 39% and Germany 30%[43]). But only Germany, Finland and Lithuania have so far enshrined this recycling of revenues in their budgets	EU ETS revenues currently amount to €3.6bn a year, a figure that is expected to increase over the coming years
Redirecting fossil fuel subsidies[44] (will be a new source of revenue for national budgets)	UN High Level Advisory Group on Climate Change Finance There is a G20 commitment to phase out subsidies, and members of the G20 have recognized that this could be a way of mobilizing climate finance[45]		OECD members spent $80bn on fossil fuel subsidies in 2011, and the trend is increasing[46]
Debt relief, in the form of debt-for-climate swaps (lender countries unilaterally agree to forego repayment of bilateral loans. May also be established for multilateral debt.)	UNDP	The US wrote off some debt as a small part of its FSF pledge[47]	About $30bn a year. During the FSF period, payments by developing countries to service long-term debt amounted to triple the FSF promised[48]

Innovative sources of public finance dependent on international agreement and collected nationally			
Internationally coordinated Financial Transaction Taxes (FTTs) (may also be established unilaterally)	France	The French FTT raises around €700m a year, of which 10% is allocated to international climate finance and global health[49],	Approximately €35m a year from France alone
Carbon pricing for international aviation (applied either by a carbon charge or auctioning in an ETS)	EU[50] LDC Group[51]	The International Civil Aviation Organization (ICAO) Assembly committed in October 2013 to develop a global market-based mechanism addressing international aviation emissions by 2016 and to apply it by 2020	
Carbon pricing for international shipping (applied either via a fuel levy or auctioning in an ETS)	EU LDC Group	Progress on market-based mechanisms has stalled over the past year – a non-revenue-raising efficiency standard has been taken forward instead[52]	
Daly-Correa tax[53] (a tax on every barrel of oil exported to rich countries, collected by OPEC governments from importing country governments, and channelled to the Green Climate Fund)	Proposed by Ecuador at Doha	Still a proposal. Idea was discussed at last year's OPEC meeting	A 3–5% tax could raise up to $80bn a year. The original idea was to replace other carbon pricing systems
'Carbon majors' levy on fossil fuel extraction (applied via a levy collected by governments from oil/gas/coal companies and channelled to a global loss and damage mechanism)	A new proposal	No, though a similar levy exists to raise money for an international oil spill insurance mechanism	Charging the 90 biggest fossil fuel companies a levy of $2 per tonne CO_2e that they are responsible for would raise over $50bn a year[54]

New commitments should also be made with regard to shifting private finance. At the national level, developed countries can help steer international private investment flows, for example through reform of rules for export credit agencies to exclude public financing for coal projects, and requiring financial actors to be transparent about the scale, nature and impacts of their investments in 'dirty' energy.

Public regulation in all countries can help channel foreign direct investment (FDI) to support, not hinder, their domestic mitigation and adaptation priorities. This involves creating an attractive environment for investment and could include legislating to set targets to phase out coal or introduce feed-in tariffs or quotas for renewable energy; and phasing out fossil fuels subsidies, sensitively and strategically, and ensuring that protections are in place for the poorest people.[55]

International actions should also be agreed, such as an agreement on principles for responsible energy and climate finance (see Box 2). This would act as a code of conduct for all private investment, and would be strictly applied to private

investment mobilized as part of national financing schedules, i.e. investment that is backed by public support. Adherence to social and environmental standards should be a precondition for any public support to the private sector.

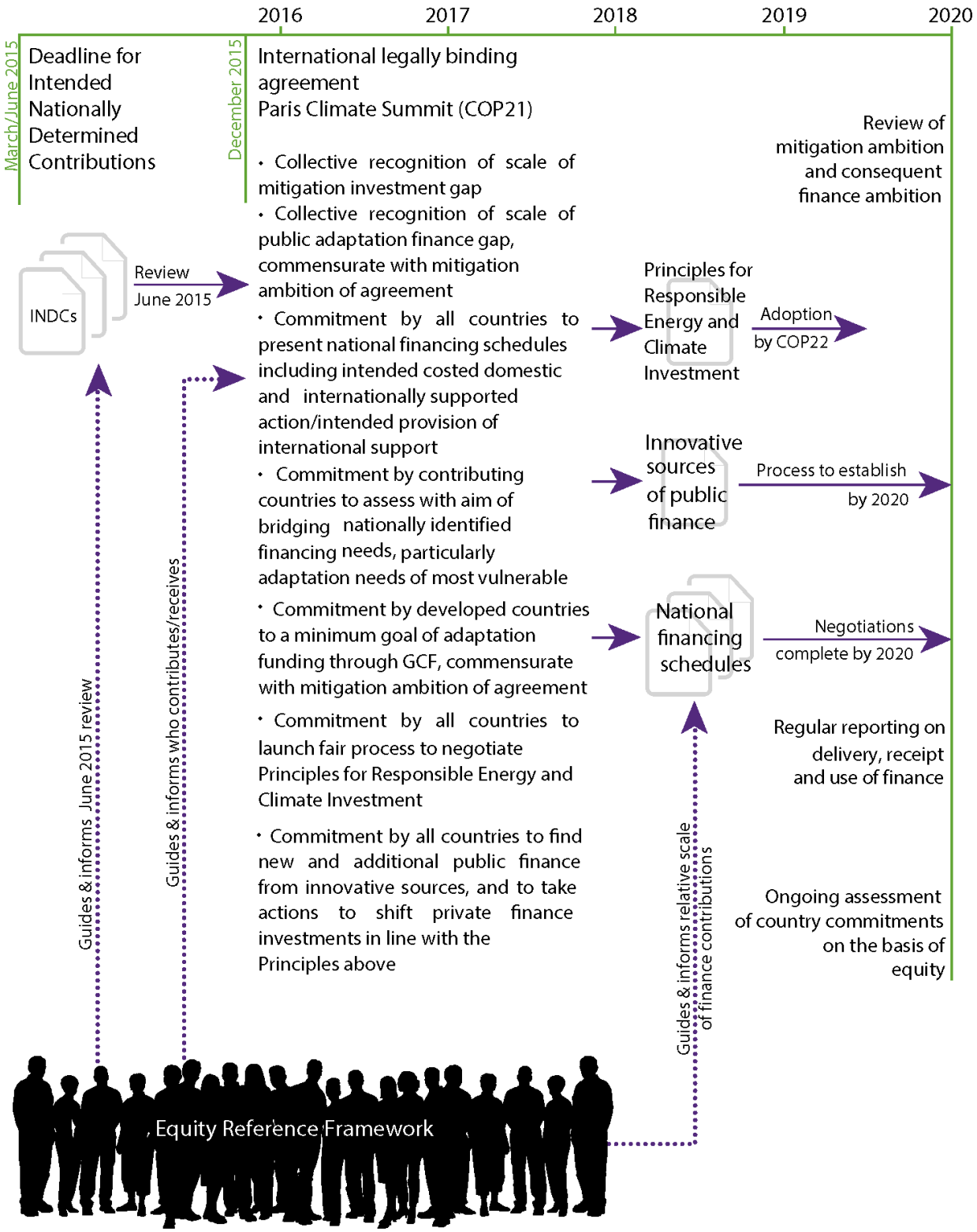
Box 2: Oxfam's proposal for the Paris Principles for Responsible Energy and Climate Investment (PRECI)

These principles should be developed at international level through an inclusive, gendered, multi-stakeholder process, with governments, civil society and the private sector all at the table. This would allow developing country governments and civil society to have a say in how private investment is directed in their countries. There are precedents for this: the Voluntary Guidelines on Responsible Governance of Tenure of Land agreed under the Committee on World Food Security CFS in Rome and the UN Guiding Principles on Business and Human Rights both followed similar processes to agree principles. The process could be launched in Lima and concluded in Paris, or launched in Paris and concluded a year or two later.

Suggested principles

1. Ensure consistency with the goals of poverty eradication and sustainable development.
2. Implement social and environmental safeguards in line with national regulations and international best practice (if different, whichever is the higher), in order to avoid negative impacts such as, *inter alia*, land grabbing, human rights violations, biodiversity degradation, tax avoidance, etc. These include international benchmarks such as Free, Prior and Informed Consent (FPIC), the OECD Guidelines and the UN Guiding Principles on Business and Human Rights.
3. Ensure that financing is transparent and accountable (e.g. not channelled through tax havens and with clear beneficial ownership and revenue transparency).
4. Implement an exclusion list of projects that cannot be supported. This includes both direct and indirect financing of harmful fossil fuel projects in developing countries which do not meet social and environmental safeguards, lack robust impact assessments, are incompatible with a country's trajectory for its fair share of emissions reductions or where pro-poor alternatives exist.
5. Assess and report on the potential lifetime cost and the scale and distribution of risk of all investments, to ensure fairness and to ensure that the receiving country and its population do not end up incurring additional unforeseen costs.

Pulling it all together: Finance in the Paris agreement: visualizing Oxfam's key recommendations



2 THE NUMBERS

As discussed in section 1 under choice C, there have been significant shortcomings in basing the scale of the Copenhagen/Cancun $100bn commitment on largely politically determined, top-down estimates of need. Oxfam proposes that the quantitative commitments under the post-2020 regime should instead be based on a mix of top-down science-based estimates and bottom-up country-specific plans – the former guiding the collective goals included in the international agreement, and the latter guiding the scale of finance provided in the context of developed countries' national financing schedules.

This section assesses the potential orders of magnitude – the numbers – that should be reflected in the international agreement, and that might be needed in the context of national action and financing schedules.

A. MITIGATION

Order of magnitude of a collective mitigation finance goal

Estimating international mitigation finance needs presents a range of questions and methodological challenges. As discussed in Box 3 below, a first challenge is to identify an appropriate metric for assessing mitigation finance needs. In preparing this paper, Oxfam commissioned the Stockholm Environment Institute (SEI) to compile and assess existing estimates of the investment required to move to a 2°C trajectory.[56] This review focuses on the following four studies:

- McCollum et al. (2013), which presents results from five separate modelling teams, all included in the IPCC Fifth Assessment Report;
- The Global Energy Assessment, which presents the MESSAGE model results of Riahi et al. (2012) (GEA, 2012, Chapter 17), included in the IPCC Fifth Assessment Report;
- The International Energy Agency (IEA)'s 2012 'Energy Technology Perspectives' report (IEA, 2012), not included in the IPCC Fifth Assessment Report; and
- The IEA's 2014 'World Energy Investment Outlook' (IEA, 2014), not included in the IPCC Fifth Assessment Report, which elaborates on the investment requirements associated with the scenarios presented in the IEA's 2013 World Energy Outlook.

Box 3: What should we be measuring?

An initial challenge in estimating total financing needs is the profusion of different metrics and concepts used across relevant studies. Parties should consider three sets of choices in determining which is most appropriate for reference in a post-2020 agreement.

Incremental versus total investment

Incremental investments reflect the total capital investment minus investment under a business-as-usual scenario. As such, they are indicative of the additional effort required and relate to the provisions of the UNFCCC requiring 'agreed incremental costs' of low-carbon action in developing countries to be supported. However, in practice it has been extremely difficult to prove what level of investment would have occurred in the absence of climate policy interventions. Total climate mitigation-specific investments, by contrast, are much easier to measure and assess.

Climate-specific versus net climate-relevant investments

Another consideration is whether to focus on gross climate-specific (or mitigation-specific or adaptation-specific) investments, notably in renewable energy and energy efficiency, or net *climate-relevant* investments, which attempt to account for the avoided investment in fossil fuels. While the latter may more accurately reflect the ultimate costs to the economy, it is questionable whether the savings from avoided investments will always be redirected towards low-carbon options. For example, it is quite unlikely that reduced investments in upstream fossil fuel supply will lead to increased investment in renewable energy supply, as the investors and products may differ substantially.

Total costs over time versus upfront investments

Incremental costs account for differences in operational and fuel expenditures, in addition to incremental upfront investments. Again, while incremental costs may better reflect the benefits that accrue in a low-carbon future (with incremental costs generally considerably lower than investments, reflecting significant fuel savings in switching from fossils to renewables), it is questionable to what extent these savings will flow to climate mitigation-specific investments. What is more, these savings do not alter the amount of investment capital required in meeting the global mitigation challenge, the mobilization of which poses an additional effort to be made in its own right, consisting of efforts to overcome financial, technological, political and societal barriers. It is towards this additional effort that developing countries are entitled to receive support from developed countries in a system of equitably sharing the global effort to fight climate change.

Here we look in more detail at existing estimates of total investment needs specific to climate mitigation consistent with avoiding 2°C of warming – and the gap between these projected needs and current total climate mitigation-specific investment – on the basis that this is the metric that could most easily be used as a yardstick for assessing progress at the UNFCCC.

Table 2.1 shows the results of the eight models included in the four studies above, suggesting that total climate mitigation-specific investment needs range from $363bn to $2.4 trillion over the next 20–30 years. Not shown in the table is total required investments in the forestry sector, which the World Economic Forum (2013) estimates at $104bn per year.

Table 2.1: Annual total investment needed under various low-carbon scenarios, averaged across years covered (USD_{2010} billion/year)

	Years covered	Difference between reference and low-carbon scenario emissions, 2030 (Gt CO_2)[1]	Low-carbon power[2] (A)	Efficiency[3] (B)	Other climate-specific[4] (O)	Climate-specific (C=A+B+O)
IMAGE model (McCollum et al. 2013)	2010–30	9.5	291	49	41	**381**
MESSAGE model (McCollum et al. 2013)	2010–30	13.0	215	81	67	**363**
TIAM-ECN model (McCollum et al. 2013)	2010–30	13.1	329	61	40	**430**
REMIND model (McCollum et al. 2013)	2010–30	15.3	544	169	57	**770**
WEIO (IEA 2014b)	2014–35	15.7	527	717	42	**1286**
ETP (IEA 2012)	2010–30	19.0	427	1975	Not Reported	**2402**
GEA (2012)	2010–30	23.6	264	181	Not Reported	**445**
WITCH model (McCollum et al. 2013)	2010–30	24.8	796	222	122	**1140**

1. Emissions reductions are for fossil fuel and industry CO_2 only.

2. Low-carbon power includes nuclear, renewable, and fossil fuel power plants with CCS (although it is not possible to separate CCS from fossil fuel power in second MESSAGE study above). All other fossil fuel power plant investment is excluded.

3. This column represents demand-side efficiency investments. For WEIO, this column also includes electric vehicles. Efficiency investments estimates are often available only on an incremental basis rather than total.

4 Studies differ widely in how they consider, categorize, and report other investment types. Other, climate-specific investment may include some combination of biofuels, uranium extraction, and R&D investments.

By comparing these levels with estimated current total climate mitigation-specific investments, the substantial financing gap becomes obvious. The most comprehensive study of current investment flows, produced by the Climate Policy Initiative (CPI), estimates the annual investment for climate mitigation at $337bn for 2012.[57] Out of the total 2012 climate finance flow for both mitigation and adaptation, the vast majority (94 per cent) targeted mitigation activities, originated in the country where investment occurred (76 per cent), flowed from the private sector (62 per cent) and funded non-fossil fuel power generation (74 per cent).

CPI estimates total North–South flows for mitigation, including private finance, at $40bn.[58]

To estimate current total climate mitigation-specific investments, we take the total mitigation figure from CPI (US$337bn). However, CPI reports only public, not private, investment in energy efficiency – US$32bn. So we swap in the IEA (2014b) estimate for energy efficiency investments in 2013, including both public and private, at US$130bn, to provide a more comprehensive picture of current financing. Thus we estimate total current annual climate-specific investment in mitigation at about US$435bn.

Table 2.2 below compares the most recent estimated current investment flows from both the CPI and IEA, with projections of investment needs for a 2ºC-consistent pathway.

Table 2.2: Annual total, global climate-specific investment needs (averaged across next 15–20 years) relative to current levels of investment (billons USD_{2010} per year).

Projected needs drawn from IEA (2014a) for energy and World Economic Forum (2013) for forestry. Amounts in parenthesis represent the low and high study estimates assessed (see above). Projected efficiency investments are not the same as in Table 2.1; instead incremental investment needs are reported.

	Total low-carbon power	**Incremental efficiency [2]**	**Total forestry and other climate-specific[3]**	**Combined climate-specific[4]**
Current[1]	262	130	43	435
Projected average annual investment needs (to 2030–35)	527 (215–796)	350 (34–520)	146 (104–226)	1,023 (448–1,195)
Increase in finance needed	265 (-47–534)	220 (-96–390)	103 (61–183)	588 (13–760)
As % (rounded)	100% (-20–200%)	170% (-70–300%)	240% (140–430%)	140% (0–170%)

1. As discussed above, we use two sources to estimate current investment. We draw low-carbon power and forestry and other investment flows from Buchner et al. (2013), representing data from 2011 and 2012. We draw incremental efficiency investment from IEA (2014b), based on 2013 data.

2. All efficiency investment projections are reported as incremental investment needs, due to the limitations of total investments discussed in the SEI discussion brief.

3. Current investment reflects a combination of biofuels and other mitigation measures categories of Buchner et al. (2013). Projected investments combines the World Economic Forum (2013) estimate for forestry investment needs ($104bn per year) with estimates for total other, climate-specific investment from Table 2.1.

4. Combined, climate-specific represent the sum of the three columns shown. The ranges show the highest and lowest sums across the 8 scenarios analysed here. The values in the ranges shown do

not necessarily match the sum of the values in the ranges for the three columns to the left. For example, the high end of the range for projected average annual investment needs ($1195bn) represents the WITCH model findings (plus forestry), while the high end of the range for incremental efficiency ($520bn per year) is drawn from the ETP study.

On this basis, Parties might conclude that the post-2020 climate regime should aim to mobilize additional climate mitigation-specific investments in the order of several hundred billion dollars, and possibly half a trillion dollars, per year over the next 15–20 years.

Unpacking the regional breakdown of these investments, it is clear that the majority are needed in developing countries. Table 2.4 shows the potential scale of the financing gap in non-OECD countries according to the CPI estimates on current flows and IEA estimates of needed flows, representing over 60 per cent of the global total.

Table 2.3: Annual, non-OECD climate-specific investment needs (averaged across next 15–20 years) relative to current levels (billion 2010 US$ per year).

	Total low-carbon power	**Incremental efficiency**	**Total forestry and other climate-specific[2]**	**Combined climate-specific**	**Of which, North–South**
Current[1]	180 (limited detail)			180	40
Projected average annual investment needs (out to 2030/35, IEA 2014b and WEF 2013)	296	205	120	621	?
Increase in finance needed	(limited detail)			441	?
As %	(limited detail)			250%	?

1. Current non-OECD investment is taken from Buchner et al. (2013), who, as noted above, do not account for private energy efficiency investments. The IEA (2014b) does not separately report non-OECD current investment.

2. Projected forestry investment needs are taken from WEF (2013), assigning total investment needs to non-OECD countries (US$104 billion/year). The remainder ($16 billion/year) are biofuels-related investment needs taken from IEA (2014b).

Meeting these investment needs in developing countries is key to unlocking ambition in the post-2020 climate regime. To achieve such an outcome, climate-specific investments must increase substantially, particularly in the form of North-South transfers. While for the complete picture *total* climate-specific investment needs need to be looked at and are also more straightforward to measure and track (except for energy efficiency), it is the *incremental* investment flows in climate-specific investment is what new and additional policies, actions, and funding must spur.

Encouraging greater investment – and critically, the appropriate balance of public and private instruments to do so – depends on a much more detailed understanding of financing needs in individual developing country contexts. For this reason, it is vital that the post-2020 regime bases commitments to provide and mobilise finance relating to supporting mitigation in developing countries as

far as possible on bottom-up country-specific assessments.

Order of magnitude in national financing needs

From the global studies, developing country investment projections are available only at the country level in IEA studies, and only for China, India and Brazil (IEA, 2014). Outside of these country-level estimates, any developing country estimates are rolled into wider regional estimates, as Table 2.4 shows.

Table 2.4: Country and regional annual average investment needs (USD2010), for climate-specific (total low-carbon power and biofuels, incremental efficiency) investments.

All estimates are from IEA 2014b. Does not include forestry investments as the WEF figure is not broken down by country.

Climate-specific investments (billion US$ 2010, IEA 2014b)				**Avoided investments (billion US$ 2010 IEA 2014b)**			
	Low-carbon power	*Efficiency*	*Biofuels*	*Fossil fuel power (includes T&D)*	*Upsteam fossil fuel*	*Total avoided investments*	*Total as share of climate-specific*
China	116	86	4	-18	-17	-35	17%
India	50	27	1	-5	-3	-8	10%
Brazil	13	13	7	-3	-14	-17	52%
SE Asia	20	17	2	-10	-5	-14	36%
Africa	21	15	0	-7	-19	-26	71%
Other Latin Am	10	12	1	-2	-11	-13	55%

Few if any directly comparable bottom-up estimates of national mitigation financing needs are currently available from which to draw conclusions about the scale of potential financing needs from a bottom-up perspective that could form the basis for national financing schedules underpinning developing country contributions in the new agreement.

Olbrisch et al. (2011) compiled a list of such studies, shown in Table 2.5, for a handful of countries.[59] Note that the projections for China and India are broadly consistent with the IEA (2014) projections.

Table 2.5: Country-level annual average investment needs from various studies, as reported by Olbrisch et al. (2011)

Full country estimates	Years	Billions	Currency	Source
China	2010–2030	175	Euros	McKinsey & Company (2009) Project Catalyst
India	2010–2030	49	US$	McKinsey & Company (2009) Project Catalyst
Indonesia	2020	4.3	US$	Regional Economics of Climate Change (RECCS), ADB 2009
Philippines	2020	1.6	US$	Regional Economics of Climate Change (RECCS), ADB 2009
Sector-specific estimates				
Indonesia	2009–2020	1	US$	NEEDS project: Energy, transport, industrial processes, ag, forestry, waste, peat
Nigeria	2010–2020	1.3	US$	NEEDS project: Energy sector, (25% emissions reduction), afforestation, agroforestry
Philippines	2008–2030	1.3	US$	NEEDS project: Energy only

Oxfam commissioned a review of current and potential or planned future investments and needs for low-carbon development in a range of developing countries.[60] The findings have their limitations due to different methodologies, scope and completeness of estimates reviewed, but they offer a snapshot of needs and of the concrete low-carbon action that meeting them could unlock.

Box 4: Examples of financing needs in different countries

South Africa: The National Climate Change Response Paper (NCCRP) is the basis for climate action in South Africa, covering areas such as renewable energies, energy efficiency and transport. The financing gap identified in the NCCRP amounts to $30bn in the transport sector and at least $45bn in the energy sector. There are plans to add 17.8GW of renewable energy capacity by 2030, with 3.7GW in added capacity already under way, with investments totalling $12bn.

Ethiopia: The Growth and Transformation Plan (GTP) for the 2015–20 period aims at both climate-resilient and low-carbon development, *inter alia* expanding electricity generation from renewable energies for both domestic and regional use, leap-frogging to energy-efficient technologies and protecting and re-establishing forests and their economic and ecosystem services, including as carbon stocks. Current annual spending by the Ethiopian government on environment and climate initiatives is $7.5bn. An estimated $50bn in total investments and operational costs will be needed over the next five years to implement the Green Economy Strategy alone (the cost of translating the Climate Resilient Strategy into practice has not been yet quantified) , with half of that amount required from financial actors outside the country.

Peru: Mitigation action is based on the *Planning for Climate Change Action* (PlanCC) that identifies 77 actions under several mitigation scenarios through to 2050. Under the *Sustainable Scenario*, where Peru would halve their emissions by 2050 compared to a BAU baseline, a total initial capital investment of 54bn Soles (approx $18bn) would be needed for actions in the energy sector, focusing on renewable energies, and in the transport sector. Actions are underway, with 550MW of renewable energy projects reaching financial closure in 2012, worth $1.1bn.

Indonesia: The basis for mitigation action through to 2029 is the Indonesian Climate Change Sectoral Roadmap (ICCSR). It covers sectors such as energy, industry, transport, forestry and waste and a range of sectors relevant to adaptation. It also aims to provide policy guidance to reach the country's pledge in Cancun to cut emissions by 26 per cent below the 2020 business-as-usual baseline and by up to 41 per cent subject to the availability of international support. The ICCSR puts the financing gap at $68.6bn for actions listed, with most of it (around $63bn) in the energy sector.

One conclusion to draw from this review is that few if any countries have yet identified their specific financing needs. Also, there is little clarity on the amounts of public finance needed to trigger additional private flows alongside the effect that national policy and climate legislation could have. Eventually, the exact nature of levels, types, instruments and channels of finance can only be accurately determined through bottom-up assessments at the national level.

Indeed, while low-carbon policy planning has advanced considerably in recent years in many countries, not least those reviewed for Oxfam, identification of strategic financing needs for those policies continues to lag some way behind. A further process, such as that proposed in this paper, to develop national financing schedules in the context of the new agreement will help to address this.

Oxfam's choice of mitigation finance numbers

Oxfam proposes that the legally binding international agreement should include:

- A collective recognition that the order of magnitude of the gap between current total climate mitigation-specific investments and estimated needs for a 2°C pathway is in the order of several hundred billion US dollars per year over the next 15–20 years, and may be greater than half a trillion US dollars per year;
- A collective recognition that the majority of the investments to close this gap are needed in non-OECD developing countries and that, while national climate action in non-OECD developing countries will play its role in shifting financial flows, international climate finance will remain crucial;
- Provisions for countries which are eligible to receive international mitigation finance to bring forward national financing plans between 2015 and 2020, detailing the proportion that they are able to fund domestically and the scale of their remaining needs for international mitigation finance support from a mix of public and private finance;
- A commitment from countries which are required to contribute to international mitigation finance as part of their fair share of the global mitigation effort. The details of this commitment would be worked out initially between 2015 and 2020 and then continued in an iterative manner from 2020 onwards, in countries' national climate financing schedules on an ongoing basis.

B. ADAPTATION

Order of magnitude of a collective public adaptation finance goal

A range of top-down estimates of adaptation finance needs have been developed over the past 5–10 years, employing a variety of methodologies. On this basis, the widely recognized order of magnitude of global needs for public adaptation finance is in the order of at least $100bn per annum through to the middle of the century.[61]

One important lesson from the most recent top-down and long-term estimates is the sensitivity of the scale of adaptation costs to the level of global mitigation ambition. One of the most recent and comprehensive studies, published by the United Nations Environment Programme (UNEP), projects annual adaptation costs for developing countries in sub-Saharan Africa alone at $67bn per year by the 2050s under a scenario consistent with limiting temperature increases to below 2ºC, and $110bn under a scenario consistent with temperature increases of over 3.5ºC. Under a scenario consistent with a temperature increase of over 4ºC, costs may reach $180bn per year by the 2050s, and will continue to increase into hundreds of billions of dollars under all scenarios in the second half of the century.[62] For this reason, any collective adaptation finance goal included in the international agreement must be linked to the level of mitigation ambition contained in the agreement, as currently proposed by the Africa Group.[63]

There is undoubtedly a significant funding gap between costs of this order of magnitude and current financial flows for adaptation. Oxfam estimates that

current annual adaptation spending in sub-Saharan Africa – including both domestic resources committed by governments themselves and international climate finance flows – amounts to approximately $6.49bn.[64] This would mean that the post-2020 international agreement should aim to scale up annual adaptation financing to sub-Saharan African countries by an additional $62bn under an agreement with a good chance of limiting emissions to 2ºC, and by $105bn under an agreement entailing a risk of exceeding 3.5ºC.

This is just for developing countries in sub-Saharan Africa, however. Other vulnerable countries, especially SIDs and LDCs outside of Africa will rightly expect adaptation funding.

However, it is important to recognize that all such top-down methodologies face challenges, relying on a range of assumptions that can generate significant uncertainties in results. As the World Bank notes, 'calculating the global cost of adaptation remains a complex problem, requiring projections of economic growth, structural change, climate change, human behaviour, and government investments 40 years in the future... [with] important assumptions and simplifications, to some degree biasing the estimates'.[65]

As a result, even the most sophisticated estimates seem increasingly out of step with costs being identified in countries from a bottom-up perspective, as discussed in Box 5.

Box 5: Current top-down adaptation cost estimates do not match realities in countries

One of the most recent and detailed top-down estimates of the cost of adaptation in Africa, based on the AD-RICE Integrated Assessment Model, projects that annual needs in developing countries across sub-Saharan African up to the 2020s amount to approximately 0.44% of GDP,[66] or currently approximately $88.14m in Uganda and $188.34m in Ethiopia.

An alternative top-down approach from the World Bank suggests that average costs across sub-Saharan Africa for 2010–19 will be approximately 0.6–0.7% of GDP,[67] or currently approximately $130.20m in Uganda and $278.34m in Ethiopia.

Yet these top-down estimates are out of step with nationally specific assessments from the bottom up in these two countries, both of which have taken proactive steps to plan for climate change. In Uganda the climate change policy includes a costed implementation plan. This puts the additional cost of adaptation at over $3.8bn over 15 years, or $258m a year – at least twice as high as the top-down estimates.[68]

The Ethiopian case is even more striking. The cost of implementing Ethiopia's Climate-Resilient Green Economy strategy tops $7.5bn annually.[69] The strategy does not disaggregate between adaptation and mitigation; however, a separate study estimates the cost to be between $0.8bn and $2.8bn annually.[70] The World Bank's own bottom-up estimate of adaptation costs in Ethiopia suggests that between $1.22bn and $5.84bn is needed.[71]

What is more, these bottom-up estimates seem to be borne out by the levels of domestic spending committed to adaptation by developing country governments themselves. Oxfam estimates that in 2011/12 the Ethiopian government invested $306m of its own domestic resources in adaptation – significantly higher than the top-down estimates of need.[72]

Ethiopia is not alone in investing a significant share of its domestic resources to address climate change adaptation needs. Oxfam estimates that the Philippines and Nepal invested $539m and $91.4m respectively in 2012, well above the scale of needs suggested by the top-down estimates for those countries. Bangladesh estimates that it spends over 1% of GDP on climate change measures, 90% of which is for adaptation.[73]

Since it is highly unlikely that developing country governments with stretched budgets would over-spend on adapting to climate change, these figures demonstrate the shortcomings of even the most sophisticated top-down models.

Table 2.6: Adaptation cost estimates for Uganda and Ethiopia

Country	Top-down estimate (UNEP)	Top-down estimate (World Bank)	Bottom-up national estimate ($)	Estimated current government spending ($)
Uganda	$88.14m	$130.2m	$258m	$18.09m
Ethiopia	$188.34m	$278.34m	$1,220m–$5,840m	$306.25m

For this reason, it is vital that the post-2020 regime bases quantitative commitments to adaptation support as far as possible on bottom-up, country-specific assessments.

Order of magnitude in national action and financing schedules

As the examples from Uganda and Ethiopia demonstrate, where robust national-level adaptation cost estimates have been produced, the orders of magnitude can be significantly higher than top-down models project. What is equally clear is that developing country governments are not simply waiting for international funds to arrive, but are urgently investing already from their own stretched budgets.

Under the Cancun Agreements, Parties have embarked on developing National Adaptation Plans (NAPs), which offer a potential vehicle for developing estimates of total financing needs, including the scale of funds that might be invested from domestic budgets and the remaining scale of funds needed from international sources.

Because NAPs (and costs) are at various stages of development, it is very difficult to estimate total needs for international adaptation finance flows. However, drawing on a proposal by the Overseas Development Institute (ODI),[74] a reasonable approach may be to suggest that in the absence of detailed bottom-up financial needs assessments, in Paris developed countries should commit initially and as a bare minimum to at least match domestic adaptation spending levels by developing country governments. There would need to be agreement to revise this over time as top down numbers became available.

On the basis of estimates of current adaptation spending from domestic budgets in four sub-Saharan African countries, Oxfam estimates that this could entail a minimum commitment of approximately $45.2bn for countries in this region alone.[75] Additional resources would rightly be expected from other countries considered highly vulnerable to climate impacts.

Oxfam's choice of adaptation finance numbers

Oxfam proposes that the legally binding international agreement should include:

- A collective recognition of the order of magnitude of the adaptation finance gap, consistent with the level of ambition in the agreement. For example, a 2ºC-consistent agreement should note that by 2050 at least an additional $60bn is needed per annum for sub-Saharan Africa alone (with further resources for other countries); and a 3.5ºC-consistent agreement should note that by 2050 at least an additional $100bn is needed per annum for sub-Saharan Africa alone (with further resources for other countries);
- A commitment from countries that are eligible to receive international adaptation finance to put forward national adaptation financing plans between 2015 and 2020, detailing the proportion that they are able to fund domestically and their remaining needs for international adaptation finance support;
- A commitment from countries that are required to contribute to international adaptation finance to scale up resources for adaptation through the GCF to a near-term figure consistent with the recognized global adaptation finance gap. For example, in a 2ºC-consistent agreement, this could amount to at least $15–20bn by 2025; in a 3.5ºC-consistent agreement, it could amount to at least $20–25bn by 2025;[76]
- A commitment from countries that are required to contribute to international adaptation finance to regularly assess national adaptation financing plans, with the aim of bridging the identified remaining needs for international adaptation finance, and a minimum commitment to match domestic spending levels by recipient countries. This minimum commitment would likely amount currently to approximately $4–5bn per year in bilateral support to countries in sub-Saharan Africa alone (with further resources needed for other countries).

CONCLUSIONS AND RECOMMENDATIONS

Together Parties can break the current stand-off over climate finance and forge an agreement that sets in motion the wave of investment and cooperation needed to meet the global mitigation challenge and guarantee support for adaptation.

But success hinges on making the right choices. While there may be no one ideal solution and some compromises may be necessary, the finance element of the Paris agreement must have certain features.

1. Recognition of the scale of the investment gap and a shared commitment to closing it

No strategy for change is credible unless it is costed. Furthermore, asking developing countries to commit to strong action without a quantitative commitment of support is unrealistic.

2. A system of individual contributions and entitlements captured alongside the agreement

Contributors may face constitutional barriers to making multi-year commitments, and few developing countries have yet identified their individual financing needs. However, a system of dynamic country-by-country financing schedules annexed to the agreement can circumvent these constraints, provide the necessary predictability, identify opportunities and continually build cooperation and collaboration between contributors and recipients.

3. A separate collective target for public finance for adaptation

Experience to date has clearly demonstrated that only a separate public finance target for adaptation is likely to close the adaptation finance gap.

4. Both top-down and bottom-up methods

The collective commitment must be firmly grounded in the science. And if ambition on mitigation is too low, this must trigger greater support for adaptation. Bottom-up national-level plans, put forward between 2015 and 2020, are needed to identify opportunities, inform negotiations on financing schedules and drive an upward spiral of greater ambition.

5. A fair shares system

Without guidance on how much countries should contribute or what they are entitled to receive, there is little prospect of real progress. Separate frameworks should be established for mitigation and adaptation, both based on the principles of the UNFCCC.

6. Robust accounting

At a minimum, this means limiting the proportion of finance provided as loans, counting only the grant equivalent of loans and finding a definition of ‘new and additional’ that will stick.

7. New commitments to establishing innovative sources of public finance

There can be no more shift in current ODA flows to climate finance, and greater reliability and predictability are needed. Put simply, new sources of public finance are needed and Parties must make an action plan aimed at getting the most promising national and international schemes off the ground.

8. New commitments to shifting private finance

Far more can and must be done to help channel private investment. Parties should capture in the Paris agreement the principles, commitments and safeguards necessary to unleash investment in equitable low-carbon solutions.

NOTES

1 The phrase 'Copenhagen/Cancun $100bn commitment' is used as shorthand for the existing goal among developed countries of 'mobilizing jointly USD 100 billion per year by 2020 to address the needs of developing countries', formally adopted under the Cancun Agreements, and with its roots in the Copenhagen Accord.

2 Oxfam (2013) 'After the Fast Start: Climate financing in 2013 and beyond', media briefing. http://www.oxfam.org/sites/www.oxfam.org/files/oxfam-media-briefing-cop19-11nov2013.pdf

3 While climate finance, a legal obligation under the UNFCCC in recognition of the responsibilities of developed countries for causing climate change and their capacities to help to tackle it, should not be considered as 'aid', the principles of aid effectiveness nonetheless offer vital guidance in ensuring effective use of limited international climate finance resources. See, for example, the Paris Declaration at http://www.oecd.org/dac/effectiveness/34428351.pdf, which states: 'We commit ourselves to taking concrete and effective action to address the remaining challenges, including: ... Failure to provide more predictable and multi-year commitments on aid flows to committed partner countries'; 'Donors commit to: ... Provide reliable indicative commitments of aid over a multi-year framework and disburse aid in a timely and predictable fashion according to agreed schedules.'

4 Oxfam's 2013 report 'Adaptation and the $100 Billion Commitment: Why private investment cannot replace public finance in meeting critical climate adaptation needs' looks at, among other things, how investment is spread unevenly between developing countries (p.9). http://www.oxfam.org/sites/www.oxfam.org/files/ib-adaptation-public-finance-climate-adaptation-181113-en_0.pdf

5 United Nations Integrated Implementation Framework (2012) 'L'Aquila Food Security Initiative'. http://iif.un.org/content/laquila-food-security-initiative

6 UN Millennium Project (2006) 'The G8 Gleneagles Summit: Doubling Aid to Africa'.http://www.unmillenniumproject.org/press/g8overview.htm

7 Copenhagen Accord and Cancun Agreements.

8 Oxfam (2013) 'Adaptation and the $100 Billion Commitment', op. cit.

9 See, for example, ECOFYS, on behalf of the European Commission (2014) 'Global Climate Finance Needs: Literary Review and Preliminary Analysis of Low Emissions Investment Plans Associated with Mitigation Pledges made by Developing Countries in the UNFCCC Negotiations'. http://www.ecofys.com/files/files/ec-ecofys-2014-global-climate-finance-needs.pdf

10 Oxfam (2013) 'Adaptation and the $100 Billion Commitment', op. cit.

11 Oxfam analysis has revealed that only 24 per cent of Fast Start Finance flowed to adaptation. Oxfam (2012) 'The Climate Fiscal Cliff: An evaluation of Fast Start Finance and lessons for the future'. http://www.oxfam.org/sites/www.oxfam.org/files/oxfam-media-advisory-climate-fiscal-cliff-doha-25nov2012.pdf

Separate analysis by the Overseas Development Institute, World Resources Institute and Institute for Global Environmental Strategies has shown that adaptation received $5.7bn of Fast Start Finance, while mitigation (including initiatives to address emissions from forests) received $22.6bn, or more than 70 per cent of the total. Smita Nakhooda et al. (2013) 'Mobilising International Climate Finance: Lessons from the Fast-Start Finance Period'. http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8686.pdf

12 Copenhagen Accord. See also UNFCC (2014) 'Fast-start Finance': http://unfccc.int/cooperation_support/financial_mechanism/fast_start_finance/items/5646.php. Following up on this pledge, the Conference of the Parties in Cancun, in December 2010, took note of this collective commitment by developed country Parties and reaffirmed that funding for adaptation would be prioritized for the most vulnerable developing countries, such as Least Developed Countries (LDCs), Small Island Developing States (SIDS) and countries in Africa.

13 COP 18 and 19 decisions.

14 This is an example of an international agreement with separate goals for public and private finance, albeit unrelated to climate adaptation or mitigation. See http://www.whitehouse.gov/the-press-office/2012/05/18/fact-sheet-g-8-action-food-security-and-nutrition

15 Green Climate Fund (2014) 'Decisions of the Board – Seventh Meeting of the Board, 18–21 May 2014'. http://gcfund.net/fileadmin/00_customer/documents/MOB201406-7th/GCF_B07_Decisions_Seventh_Meeting_fin_20140619.pdf

16 Oxfam (2013) 'Adaptation and the $100 Billion Commitment', op. cit.

17 See, for example: Stockholm Environment Institute (2010) 'Private Sector Finance and Climate Change Adaptation', policy brief. http://www.sei-international.org/mediamanager/documents/Publications/Climate-mitigation-adaptation/policybrief-privatesectorfinance-adaptation.pdf; World Resources Institute (2013) 'Adaptation and the Private Sector', blog series. http://www.wri.org/tags/adaptation-and-private-sector; Oxfam America (2012) 'PREP Value Chain Climate Resilience: A guide to managing climate impacts in companies and communities'. http://www.oxfamamerica.org/explore/research-publications/prep-value-chain-climate-resilience/; Oxfam (2012) 'Climate Change Risks and Supply Chain Responsibility: How should companies respond when extreme weather affects small-scale producers in their supply

chains?'. http://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/dp-climate-change-risks-supply-chain-responsibility-27062012-en_5.pdf

18 IPCC AR5 WGI includes a recognition of the adaptation finance gap. Stern's Yale speech refers to the need to increase public finance for adaptation. http://www.state.gov/s/climate/releases/2014/232962.htm

19 Green Climate Fund (2014) 'Decisions of the Board', op. cit.

20 'Submission by Swaziland on behalf of the African Group on adaptation in the 2015 agreement' (2013). https://unfccc.int/files/documentation/submissions_from_parties/adp/application/pdf/adp_african_group_workstream_1_adaptation_20131008.pdf

21 T. Athanasiou, S. Kartha, and P Baer (2014) 'National Fare Shares: The Mitigation Gap – Domestic Action and International Support' http://www.ecoequity.org/wp-content/uploads/2014/11/National-fair-shares.pdf

22 At COP19 in Warsaw, Parties agreed to publicly outline what actions they intend to take under a global agreement well before COP21 in Paris (and for those countries in a position to do so, by March 2015). These country commitments are known as Intended Nationally Determined Contributions (INDCs). A key task at COP20 in Lima will be to determine the information that should be included in INDCs.

23 'Submission by Swaziland on behalf of the Africa Group in respect of Workstream I: 2015 Agreement under the ADP'. https://unfccc.int/files/bodies/awg/application/pdf/adp_2_african_group_29042013.pdf

24 McKinsey & Company (2010) 'Sustainability & Resource Productivity: Greenhouse gas abatement cost curves'. http://www.mckinsey.com/client_service/sustainability/latest_thinking/greenhouse_gas_abatement_cost_curves

25 Oxfam America (2014) 'Who was willing to talk dollars and cents at this week's UN Climate Summit?', blog post. http://politicsofpoverty.oxfamamerica.org/2014/09/willing-talk-dollars-cents-weeks-un-climate-summit/

26 Oxford Climate Policy (2014) 'South-South Solidarity in Climate Finance', Concept Note. http://www.oxfordclimatepolicy.org/publications/documents/GCFSSFfinal.pdf

27 Oxfam (2009) 'Hang Together or Separately?'. http://www.oxfam.org/en/research/hang-together-or-separately

28 'World Climate Change Fund: A Proposal by Mexico' (Presentation to the Bonn Climate Change Conference, June 2008) https://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/mexico.pdf

29 No new formal categories of countries should be established, but rather developing countries should be guided by an equity reference framework to opt in to making contributions, or out of receiving them, on a voluntary basis. This is because developed countries have consistently failed to keep their commitments made under the UNFCCC, including to reduce their own emissions furthest and fastest, and to provide scaled-up, adequate, predictable, new and additional financial, technology transfer and capacity-building support to developing countries. In this context, developing countries must be free to determine whether and when to take on new and more stringent commitments – albeit guided by objective equity reference frameworks that apply to all – to ensure that developed countries are not simply shifting the burden of their own broken promises onto others.

30 See the submission of Climate Action Network International on Convention-based equity indicators: http://www.climatenetwork.org/publication/can-core-convention-based-equity-indicators

31 See Oxfam (2009) 'Hang Together or Separately', op. cit., for the rationale for Oxfam's choice of 1990 as an appropriate start date for measuring cumulative emissions, and choice of $9,000 as an appropriate development threshold.

32 Oxfam acknowledges the assistance of the Climate Equity Reference Project (formerly the Greenhouse Development Rights project) in preparing these indicative fair shares of mitigation finance. The exact parameters used these calculations are as follows:

The calculations are based on a 'strong 2°C' mitigation pathway, which provides a greater than 67% change of keeping warming below 2°C, and a less than 50% chance keeping warming below 1.5°C. A country's cumulative emissions (responsibility) are counted since 1990. Capacity is based on the income accruing to the population living above a development threshold of $9,000. (In other words, the income of those people living below the threshold is excluded.) Income above this threshold is counted towards capacity at a steadily rising rate until we reach a 'luxury threshold' of $50,000, above which all income is counted towards the country's capability. Equal weighting is given to responsibility and capacity. The calculations include non-CO2 gases but exclude the land sector (LULUCF). How much of their fair share countries should deliver domestically is calculated looking at the global average rate of reduction needed and adjusting this for income, so that richer countries reduce domestic emissions faster than the global average rate. (Note that these parameters are set to match Oxfam's policy preferences and represent just one set of possible 'equity settings.)

For a detailed exploration of the methodology underlying the Climate Equity Reference Project and extensive illustrative quantitative analysis based on a number of different cases and equity

settings, see: T. Athanasiou, S. Kartha, and P Baer (2014) 'National Fare Shares: The Mitigation Gap – Domestic Action and International Support', op. cit.

33 See M. Ravallion (2009) 'Do Poorer Countries Have Less Capacity for Redistribution?', World Bank Policy Research Working Paper. http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-5046. A reasonable marginal tax rate could be considered to be no greater than 60%, for example.

34 D. Wheeler (2011) 'Quantifying Vulnerability to Climate Change: Implications for Adaptation Assistance' http://www.cgdev.org/sites/default/files/1424759_file_Wheeler_Quantifying_Vulnerability_FINAL.pdf

Dataset available here: http://www.cgdev.org/publication/dataset-vulnerability-climate-change

35 The calculation for indicative shares of adaptation finance is performed as follows:

Countries with a per capita capability (for those persons above the $9,000 threshold) lower than Bulgaria are excluded.

Any country which is not in the 'very high' or 'high' category in the UNDP's Human Development Index (HDI), and which has not already been excluded in (1), is now excluded. (This includes, for example, Botswana and Gabon, as while their capability is above Bulgaria, they are only in the 'medium' category in the HDI.)

Any country that would require a marginal tax rate of over 60% on its wealthier citizens (those living on over $13 a day), in order to bring the whole population above a $2/day income threshold, and which has not already been excluded in (1) or (2) is now excluded. (This includes China and Kazakhstan.)

A share of the global Responsibility and Capacity Index (RCI) is then created for each country using the Climate Equity Reference Calculator (www.gdrights.org/calculator). This share is then adjusted to account for the fact that we now have a smaller list of countries.

An adjustment for vulnerability is performed using data from David Wheeler's 2011 study 'Quantifying Vulnerability to Climate Change: Implications for Adaptation Assistance', op. cit. Note that we use the overall 'climate drivers' scores (column B in the linked table), not the 'vulnerability' scores, which are adjusted for income and other factors. This is because we already adjust for income with the RCI. As the 'climate drivers' scores are out of 100, with higher scores meaning higher exposure, these scores are inverted before then being multiplied by the RCI and divided by 100 to give a new RCI adjusted for vulnerability. These are then converted back into percentages (as after being adjusted for vulnerability they no longer add up to 100.)

Finally, the new contributors are separated from the existing contributors. (I.e. Russia could be expected to provide 18% of the funding from new contributors, not 18% of total international adaptation finance.)

36 See the proposal for matching adaptation finance made by the Overseas Development Institute (ODI), 'Fair share: climate finance to vulnerable countries', here: http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9164.pdf. This may be an important means of assuring LDCs, SIDS and African countries that if they are indeed to develop their National Adaptation Plans (NAPs), and to back them with significant levels of domestic investment, then a minimum level of financing will be forthcoming from the international community. This was notably not the case when LDCs were asked to develop National Adaptation Programmes of Action (NAPAs) after COP7 in Morocco, with the LDC Fund established to fully fund them remaining significantly underfunded many years later.

37 CAN Europe (2012) 'A Recipe for Transparent Climate Finance in the EU'. http://www.climnet.org/resources/doc_view/2025-can-europe-a-recipe-for-transparent-climate-finance-in-the-eu-may-2012

38 Responding to Climate Change (RTCC) (2013) 'UN climate chief underlines Green Climate Fund concerns'. http://www.rtcc.org/2013/10/22/un-climate-chief-underlines-green-climate-fund-concerns/

39 Including several regions of China, Chile, Mexico, South Africa, etc. See International Emissions Trading Association (IETA), 'The World's Carbon Markets'. http://www.ieta.org/worldscarbonmarkets

40 Environmental Defense Fund (EDF) (2014) 'South Korea'. http://www.edf.org/sites/default/files/South-Korea-ETS-Case-Study-March-2014.pdf

41 Italian Presidency of the Council of the European Union (2014) 'EU submission 2014 on strategies and approaches for scaling up climate finance'. http://www4.unfccc.int/submissions/Lists/OSPSubmissionUpload/39_24_130570842518978218-IT-09-29-EU subm strategies and approaches %282%29.pdf

42 European Commission (2014) 'Progress Towards Achieving the Kyoto and EU 2020 Objectives'. http://ec.europa.eu/transparency/regdoc/rep/1/2014/EN/1-2014-689-EN-F1-1.Pdf

43 These funds do not represent the sum total of spending on international climate finance for these countries – ETS revenues are just one source. The UK and Denmark do not earmark ETS revenues in their national budgets, but report spending an equivalent amount on international climate finance. Source: EIONET (2014) 'Reporting Obligations Database'. http://rod.eionet.europa.eu/obligations/698/deliveries

44 See Oxfam (2014) 'Food, Fossil Fuels and Filthy Finance'. http://policy-

practice.oxfam.org.uk/publications/food-fossil-fuels-and-filthy-finance-332741

45 ODI (2013) 'At cross-purposes: subsidies and climate compatible investment', p.15. http://www.odi.org/publications/7343-subsidies-climate-compatible-investment-fossil-fuel-private-finance

46 OECD (2013) 'OECD-IEA Fossil Fuel Subsidies and Other Support', pp.40-41. http://www.oecd.org/site/tadffss/

47 World Resources Institute/ODI (2012) 'The U.S. Fast-Start Finance Contribution'. http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/7663.pdf

48 Nature (2014) 'Debt relief and financing climate change action'. http://www.nature.com/nclimate/journal/v4/n8/full/nclimate2303.html?WT.ec_id=NCLIMATE-201408

49 Leading Group (2014) 'Innovative financing: a solution to diversify the financial toolbox for sustainable development and climate'. http://www.leadinggroup.org/IMG/pdf/Concept_note_side_event_NY_FINAL_ENG.pdf

50 Italian Presidency of the Council of the European Union (2014) 'EU submission 2014 on strategies and approaches for scaling up climate finance', op. cit.

51 Least Developed Countries Group (2014) 'Submission by Nepal'. http://www4.unfccc.int/submissions/Lists/OSPSubmissionUpload/39_99_130584499817551043-Submission%20by%20Nepal%20ADP_21%20Oct%202014.pdf

52 Lithuanian Presidency of the Council of the European Union (2013) 'Submission by Lithuania', p.P 18. http://unfccc.int/files/documentation/submissions_from_parties/application/pdf/cop_suf_eu_02092013.pdf

53 RTCC (2013) 'Ecuador finalising OPEC oil tax plans'. http://www.rtcc.org/2013/02/26/ecuador-finalising-opec-carbon-tax-plans/

54 Climate Justice Programme (2013) 'Questions and Answers of a Levy on the Carbon Majors'. http://climatejustice.org.au/questions-answers-levy-carbon-majors-post/

55 Oxfam (2014) 'Food, Fossil Fuels and Filthy Finance', op. cit.

56 Analysis by Stockholm Environment Institute (2014) for Oxfam, forthcoming

57 As this report was being finalised, CPI published the 2014 Global Landscape of Climate Finance Report, which showed a decrease in climate finance for 2013.

58 CPI 'Global Landscape of Climate Finance 2013',Box 2 p15. After applying caveats, CPI settle on a range of $39-$46bn for total North South flows. In their Figure 5 on p14, they report that 12% of overall climate finance flows from North-South, resulting in $43bn. They estimate that on average, 94% of total flows are for mitigation, giving an average value for North-South flows of $40bn.

59 Climate Policy 2011(3) "Estimates of incremental investment for and cost of mitigation measures in developing countries.".

60 Analysis by Chantal Naidoo for Oxfam, forthcoming

61 Oxfam (2012) 'Submission to UNFCCC Work Programme on Long-term Climate Finance'. http://www.oxfam.org/sites/www.oxfam.org/files/tb-unfccc-work-programme-climate-finance-14082012-en.pdf

62 UNEP (2013) 'Africa's Adaptation Gap: Technical Report'. http://www.unep.org/pdf/AfricaAdapatationGapreport.pdf

63 'Submission by Swaziland on behalf of the Africa Group on adaptation in the 2015 agreement' (2013). https://unfccc.int/files/documentation/submissions_from_parties/adp/application/pdf/adp_african_group_workstream_1_adaptation_20131008.pdf

64 These estimates are based on national budget analysis of adaptation spending and data on international adaptation finance flows in Zambia, (forthcoming report), Uganda, Tanzania, and Ethiopia (Bird, 2014). We have then extrapolated from these national estimates in four countries to an estimate for spending across sub-Saharan African developing countries as a whole, by taking the average percentage of national GDP spent on adaptation in the four countries and applying it to the GDP for the sub-Saharan African region as a whole.

Zambia, Unpublished consultants report 2013 will be forthcoming publication;

Uganda, Ethiopia and Tanzania; Bird: http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9164.pdf

65 World Bank (2010) 'Economics of Adaptation to Climate Change: Synthesis Report'. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/06/27/000425970_20120627163039/Rendered/PDF/702670ESW0P10800EACCSynthesisReport.pdf

66 UNEP (2013) 'Africa's Adaptation Gap: Technical Report', op. cit.

67 World Bank (2010) 'Economics of Adaptation to Climate Change: Synthesis Report', op. cit.

68 The Republic of Uganda, Ministry of Water and Environment (2013) 'Draft Costed Implementation Strategy of the National Climate Change Policy'. http://ccu.go.ug/images/Publications/uganda%20cc%20costed%20implementation%20strategy_

final%20version%20for%20approval_14_10_2013.pdf

69 Federal Democratic Republic of Ethiopia (2011) 'Ethiopia's Climate-Resilient Green Economy Strategy', Addis Ababa: Federal Democratic Republic of Ethiopia.

70 S. Robinson, K. Strzepek and R. Cervigni (2013) 'The Cost of Adapting to Climate Change in Ethiopia: Sector-Wise and Macro-Economic Estimates', ESSP Working Paper 53, International Food Policy Research Institute.

71 World Bank (2010) 'Economics of Adaptation to Climate Change: Synthesis Report', op. cit.

72 According to ODI, Ethiopia spent $440m in 2012. Of the $440m, $352m was from domestic sources and $88m from international sources. Of that, 87 per cent was for adaptation and 13 per cent for mitigation.

73 In 2012 the Philippines spent PHP 35bn on climate change, 70 per cent of which was for adaptation (World Bank 2013, Climate Public Expenditure and Institutional Review (CPEIR)). In 2012 Nepal spent 6.7 per cent of GDP or NR 4.6bn on climate actions, 75 per cent of which was spent on adaptation (Government of Nepal et al., 2011, CPEIR). According to the CPEIR for Bangladesh, the country spent 1 per cent of GDP on climate change in 2011/12, 97 per cent of which was for adaptation (Government of the People's Republic of Bangladesh, 2012, CPEIR).

74 ODI (2014) 'Fair share: climate finance to vulnerable countries', op. cit.

75 See note 64. We have extrapolated from these national estimates in four countries to an estimate for spending across developing countries in sub-Saharan African by taking the average percentage of national GDP spent on adaptation in the four countries and applying it to GDP for the sub-Saharan African region as a whole.

76 Assuming that the GCF channels half of the needed additional international adaptation flows (i.e. approximately $30bn in a 2ºC scenario, and $50bn in a 3.5ºC scenario), with a linear increase year-on-year from an initial capitalization of $7.5bn for adaptation in 2015.

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