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Rich countries' 'climate debt' and how they can repay it

An ActionAid rough guide

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Introduction

Tackling climate change effectively is going to require serious sums of money. Developing countries, many of whom are on the front-line in the battle against global warming, will require large amounts of external public finance to adapt to climate change, reduce their emissions and move to low-carbon pathways out of poverty. Rich countries, who have largely caused the climate crisis through their historical greenhouse gas emissions, will have to find a way to pay for the true costs of their pollution.

The Bolivian Government has developed the concept of 'climate debt' to explain rich countries' historic responsibilities. Climate debt consists of two elements:

- An 'emissions debt' – amassed by rich countries from their excessive consumption of the limited atmospheric space: they have left almost no space for developing countries to increase their greenhouse gas emissions if climate change is to be contained. And there is, to date, no example of a poor country that has become rich without increasing its emissions.
- An 'adaptation debt' – through their emissions rich countries have disproportionately contributed to the impacts of climate change being felt by developing countries.

To repay their climate debt rich countries must do two things:

1. Make deeper emissions cuts than what they are currently considering so that developing countries have some space to grow their emissions without destroying the planet.
2. Provide finance and technology to developing countries to enable them to reduce their emissions, adapt effectively to climate change and chart low-emission pathways out of poverty.

ActionAid believes that as a first instalment of their climate debt repayment plan rich countries must cut their emissions by *at least* 40 percent against 1990 levels by 2020 and provide developing countries with *at least* US\$200 (€132 billion) a year by 2020 to enable them to tackle climate change effectively.

Where do these numbers come from?

40%

The Intergovernmental Panel on Climate Change (IPCC) recommended rich countries reduce their emissions by between 25-40 percent on 1990 levels by 2020 in its Fourth Assessment Report published in 2007.¹ Rich countries signed up to that level of ambition when they agreed to the Bali Action Plan which set out a roadmap for a new global deal on climate change to be reached in Copenhagen in December 2009.²

However, the IPCC range of 25-40 percent is based on containing global warming at 2-2.4 degrees centigrade above pre-industrial levels. Those on the front-line of climate impacts, such as the small island developing states, want global warming to be contained at 1.5 degrees because their survival is threatened by higher temperature rises.³ That implies both deeper emissions reduction targets and early action to ensure deep cuts are realised. A target of at least a 40 percent reduction on 1990 levels by 2020 is the minimum that rich countries must agree to, indeed many developing countries and scientists are calling for reductions of 45 percent plus.

US\$200 billion a year

No global estimate can ever be one-hundred per cent precise. But enough research has been done to suggest that the annual cost of tackling climate change in developing countries by 2020 is going to be *at least* US\$200 billion, over and above existing commitments on development finance, such as the long-standing commitment for rich countries to give 0.7 of their Gross National Income as aid.

The mitigation number

Researchers at the European Commission (EC) conservatively suggest that developing countries will need at least €71 billion (US\$106.5 billion) a year by 2020.

¹ IPCC 4th assessment report (2007): <http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4-wg3-chapter13.pdf> page 776

² Bali Action Plan (2007): <http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf> page 3

³ 'Small islands: go below 1.5 degrees', 22 September 2009: <http://en.cop15.dk/news/view+news?newsid=2150#>

Table 1: Money required for mitigation in developing countries

Issue	Amount required per year by 2020	
Clean technology ⁴	US\$72 billion	€48 billion ⁵
Combating deforestation ⁶	US\$27 billion	€18 billion
Agricultural mitigation ⁷	US\$7.5 billion	€5 billion
TOTAL	US\$106.5 billion	€71 billion

Conversion rate used: €1 = US\$1.5 and US\$1 = €0.66.

Using the EC figures for clean technology we assume no global carbon market will exist before 2020 so the money will have to come from external public finance.

For the sake of simplicity we have rounded the total number down to US\$100 billion (€66 billion), to be provided from external public finance.

The adaptation number

A number of studies have looked at the cost of adaptation, notably the UN Development Programme, which said developing countries would need an additional US\$86 billion a year by 2015.⁸ More recently a World Bank study has said that developing countries will need to spend between US\$75-100 billion a year (on average) of public money between 2010 and 2050.⁹ We believe that given that adaptation costs for almost every developing country are incurred as a result of the actions of rich countries, it is only fair that rich countries meet those costs in full.

⁴ European Commission staff working document accompanying Communication 'Towards a comprehensive climate change agreement in Copenhagen' part 1, 'costs associated with the resulting actions in the energy system and the industrial sectors', page 74: http://ec.europa.eu/environment/climat/pdf/future_action/part1.pdf

⁵ Exchange rate of US\$ to € assumes €1=US\$1.34528 and US\$1=€0.74337. Numbers are rounded up to the nearest US\$1 billion and €1 billion respectively. This exchange rate applies to all numbers in this paper.

⁶ European Commission staff working document accompanying Communication 'Towards a comprehensive climate change agreement in Copenhagen' part 1, 'reductions in emissions from deforestation and forest degradation in development countries', page 9: http://ec.europa.eu/environment/climat/pdf/future_action/part1.pdf

⁷ European Commission staff working document accompanying Communication 'Towards a comprehensive climate change agreement in Copenhagen' part 1, 'mitigation action to reduce non-CO2 greenhouse gases in agriculture: nitrus oxide and methane', page 86: http://ec.europa.eu/environment/climat/pdf/future_action/part1.pdf

⁸ UNDP Human Development Report 2007/2008, page 194: "In total they amount to new additional adaptation finance of around US\$86 billion a year by 2015 (table 4.3).":

http://hdr.undp.org/en/media/HDR_20072008_EN_Complete.pdf

⁹ World Bank (2009), The costs to developing countries of adapting to climate change: <http://siteresources.worldbank.org/INTCC/Resources/EACCRReport0928Final.pdf>

The World Bank study is premised on global warming being contained at 2 degrees centigrade above pre-industrial levels. Whilst we argue that 1.5 degrees is the right target to aim for we also recognise that the lack of action to reduce rich countries' emissions by the amount required makes it a distinct possibility that both the 1.5 and 2 degrees targets will be missed. A higher level of global warming will mean increased adaptation costs so we have chosen to use the upper end of the World Bank's adaptation number.

The adaptation number we use is therefore US\$100 billion (€66 billion) a year by 2020, to be provided from external public finance.

Can you give an example of what spending money on mitigation and adaptation looks like?

Money spent on mitigation could be used to reduce a country's reliance on fossil fuels by investing in renewable energy for electricity generation, support low-emission agriculture and combat deforestation. Money spent on adaptation could include building or improving flood defences, improving water storage facilities, or helping particularly vulnerable groups such as smallholder farmers to diversify their crops.

How much money is currently available?

There is not yet any global fund exclusively for mitigation that is accountable to the UNFCCC.

Multilateral funds concerned with adaptation have a total of US\$545.8 million pledged to them as grant funding. The grand total of grants pledged to multilateral adaptation channels amounts to a mere US\$545.8 million. This is a total, cumulative figure rather than an annual figure and includes the World Bank's Pilot Program on Climate Resilience which is not accountable to the UNFCCC. If the World Bank money is excluded then the figure falls to US\$299.3 million, a drop in the ocean of what is required by 2020.

Table 2: Money pledged to global adaptation funds¹⁰

Fund	Amount pledged for adaptation	
Special Climate Change Fund	US\$104.5 million	€69 million
Least Developed Countries Fund	US\$176.5 million	€116 million
Kyoto Protocol Adaptation Fund	US\$18.3 million	€12 million
World Bank Pilot Program on Climate Resilience	US\$246.5 million	€163 million
TOTAL	US\$545.8 million	€360 million

Conversion rate used: €1 = US\$1.5 and US\$1 = €0.66.

Who should pay?

The Adaptation Financing Index¹¹ combines responsibility for greenhouse gas emissions with ability to pay and we use it here as a proxy for calculating the first instalment of rich countries' climate debt repayment plan. Responsibility is calculated by counting each countries' excessive carbon emissions since 1992, the year in which the UN Framework Convention on Climate Change (UNFCCC) was established whereby all countries acknowledged the danger posed by global warming. Ability to pay is calculated by a country's Human Development Index score. Only countries scoring above 0.9 (on a scale of 0 to 1) are deemed capable of contributing. Responsibility and capability are given equal weighting in the Index.

Twenty-eight countries are deemed both responsible and capable in the Index. Ten of the EU's twenty-seven countries have Human Development Index scores of less than 0.9 and are therefore excused from contributing.

The Adaptation Financing Index was designed to calculate countries' contributions to financing climate change adaptation, particularly since adaptation programmes and projects are unlikely to attract large-scale flows of private finance. Yet given the urgency of action to tackle climate change public finance for mitigation will also be required. The same formula for calculating countries' fair share of the adaptation bill holds for mitigation too.

¹⁰ ActionAid (2009), Equitable Adaptation Finance:

http://www.actionaid.org/assets/pdf/5CEquitable_Adaptation_Finance.pdf

¹¹ See: Oxfam (2007), Adapting to Climate Change, page 28:

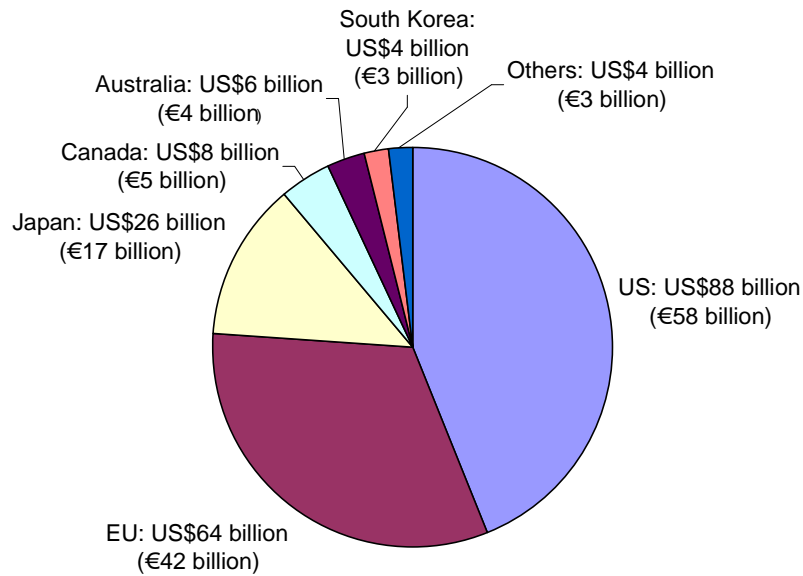
<http://www.oxfam.org/sites/www.oxfam.org/files/adapting%20to%20climate%20change.pdf>

Table 3: Using the methodology contained in the Index the following amounts are assigned.

Country	% of global total	Mitigation amount per year by 2020 (billions)		Adaptation amount per year by 2020 (billions)		TOTAL amount per year by 2020 (billions)	
		US\$	€	US\$	€	US\$	€
US	44%	44	29	44	29	88	58
EU17	32%	32	21.1	32	21.1	64	42
Japan	13%	13	8.6	13	8.6	26	17
Canada	4%	4	2.6	4	2.6	8	5
Australia	3%	3	2	3	2	6	4
South Korea	2%	2	1.3	2	1.3	4	3
Others ¹²	2%	2	1.3	2	1.3	4	3
TOTAL	100%	100	66	100	66	200	132

Conversion rate used: €1 = US\$1.5 and US\$1 = €0.66.

Note: numbers may not add up precisely due to rounding.



¹² The other countries are: Switzerland, Norway, Israel, Singapore, New Zealand and Iceland. See: Oxfam (2007), Adapting to Climate Change, page 28:

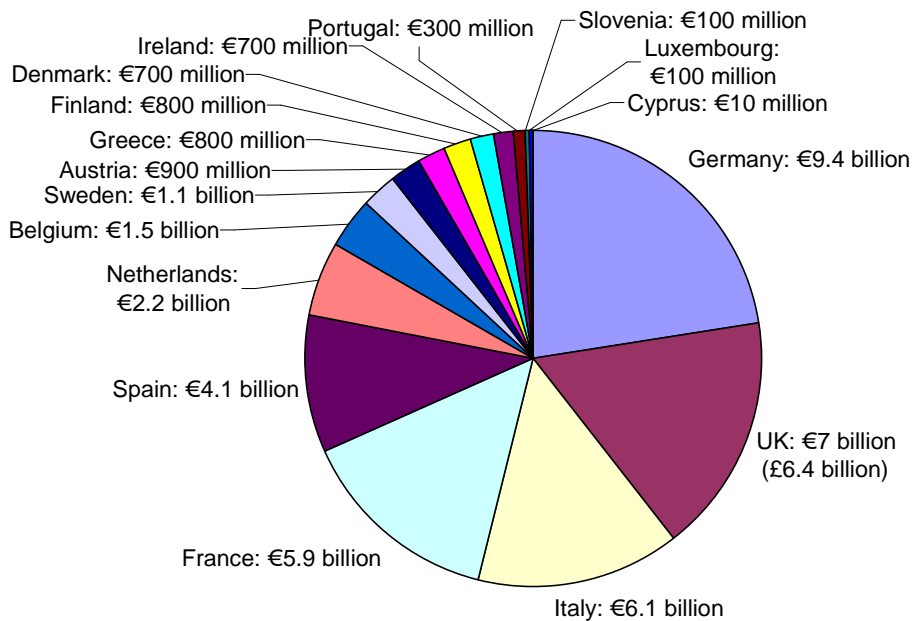
<http://www.oxfam.org/sites/www.oxfam.org/files/adapting%20to%20climate%20change.pdf>

Table 4: Within the EU17 the fair share for each country is as follows.

Country	% of global total	Mitigation amount per year by 2020 (billions)		Adaptation amount per year by 2020 (billions)		TOTAL amount per year by 2020 (billions)	
		US\$	€	US\$	€	US\$	€
Germany	7.1%	7.1	4.7	7.1	4.7	14.2	9.4
UK	5.3%	5.3	3.5	5.3	3.5	10.6	7 (£6.4)
Italy	4.6%	4.6	3.05	4.6	3.05	9.2	6.1
France	4.5%	4.5	2.95	4.5	2.95	9	5.9
Spain	3.1%	3.1	2.05	3.1	2.05	6.2	4.1
Netherlands	1.7%	1.7	1.1	1.7	1.1	3.4	2.2
Belgium	1.1%	1.1	0.75	1.1	0.75	2.2	1.5
Sweden	0.8%	0.8	0.55	0.8	0.55	1.6	1.1
Austria	0.7%	0.7	0.45	0.7	0.45	1.4	0.9
Greece	0.6%	0.6	0.4	0.6	0.4	1.2	0.8
Finland	0.6%	0.6	0.4	0.6	0.4	1.2	0.8
Denmark	0.5%	0.5	0.35	0.5	0.35	1	0.7
Ireland	0.5%	0.5	0.35	0.5	0.35	1	0.7
Portugal	0.2%	0.2	0.15	0.2	0.15	0.4	0.3
Slovenia	0.1%	0.1	0.05	0.1	0.05	0.2	0.1
Luxembourg	0.1%	0.1	0.05	0.1	0.05	0.2	0.1
Cyprus	0.01%	0.01	0.005	0.01	0.005	0.02	0.01
TOTAL	32%	32	21.1	32	21.1	64	42

Conversion rate used: €1 = US\$1.5 and US\$1 = €0.66; €1 = £0.92.

Note: numbers may not add up precisely due to rounding.



How should the funds be raised?

Research for the Stamp Out Poverty coalition¹³ suggests that around US\$82 billion (€54 billion) per year could be raised by a combination of four international mechanisms. If successfully established these would reduce the size of the first instalment of rich countries' climate debt repayment to US\$118 billion (€78 billion) a year.

Norwegian 'Assigned Amounts Units' levy

The international auctioning of national carbon emission permits suggested by Norway as a means to finance adaptation would be likely to raise at least US\$14 billion (€9.2 billion) per year and could raise more if more permits were auctioned.

International Air Travel Adaptation Levy

A passenger tax on international air travel as suggested by the Maldives would be likely to raise at least US\$13 billion (€8.6 billion) per year for adaptation and could raise more if the levy were set at a higher level.

¹³ Stamp Out Poverty (2009), Assessing the alternatives: <http://www.stampoutpoverty.org/?lid=10939>

International Maritime Emission Reduction Scheme – international version

An industry tax on international shipping would be likely to raise at least US\$15 billion (€10 billion) per year and could raise more if the levy were set at a higher level.

Financial Transaction Tax (FTT)

A very small tax on financial transactions, originally suggested by the economist James Tobin, could raise between US\$60 to 100 billion (€39.6 to €66 billion) per year. A proportion of this could be earmarked for tackling climate change.

Given that the amounts likely to be raised by these mechanisms falls short of the US\$200 billion (€132 billion) required, rich countries will have to find the remainder of the money from as yet unidentified sources and mandatory contributions.

Which institution should spend the money?

Any global deal on post-2012 targets for mitigation and adaptation will be agreed under the UN Framework Convention on Climate Change (UNFCCC). It is therefore logical that the climate finance needed to achieve greenhouse gas emission reductions in developing countries and to enable them to adapt is channelled to them through an institution fully accountable to and under the control of the UNFCCC.

For more detail on institutions please see: *ActionAid (2009), Equitable Adaptation Finance: http://www.actionaid.org/assets/pdf%5CEquitable_Adaptation_Finance.pdf*

Other issues

Technology transfer

Technology transfer must be a key part of a new global deal on climate change. To enable effective action on mitigation and adaptation in developing countries an agreed outcome in Copenhagen outcome should:

- Provide the necessary public finance to developing countries for state of the art environmentally sound technology deployment and diffusion.
- Establish a Multilateral Technological Cooperation Fund for delivering the required finances to developing countries under the guidance and authority of the UNFCCC.
- Enable the setting up of joint regional technology Research and Development (R&D) Centres.
- Allow developing countries to make use of Trade-Related Aspects of Intellectual Property Rights (TRIPS) flexibilities for the deployment and diffusion of environmentally sound technologies by securing exemptions from Intellectual Property related costs.

Legal architecture

The Kyoto Protocol established a system whereby developed (annex 1) countries commit to take legally-binding emission reduction targets and to be subject to an international compliance regime. Until the international community agrees to a system that provides better environmental outcomes, a stronger compliance mechanism and has widespread support, the Kyoto Protocol should continue with a second commitment period.

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