



MAKING A KILLING

**WHO PAYS THE
REAL COSTS
OF BIG OIL,
COAL AND GAS?**

JULIE-ANNE RICHARDS
& KEELY BOOM
CLIMATE JUSTICE PROGRAMME



Climate change is already here, and its impact is already being felt. With less than 1°C of global warming, the impacts of climate change are already severe on the world’s poorest and most vulnerable people.

The worst impacts of climate change - those that go beyond people’s ability to cope and adapt - are known as “Loss and Damage.” Loss and damage includes

extreme events, like droughts and tropical storms, and slow-onset events like sea-level rise, increasing temperatures, glacial retreat causing flooding and eventual drought, and desertification.

The single biggest cause of climate change is burning fossil fuels. The Carbon Majors - who include big coal, oil and gas - have extracted fossil fuels responsible for roughly two thirds of climate change pollution.

Right now, the poorest and most vulnerable communities are paying for loss and damage - with

their lives, their homes, their ability to grow food, while big coal, oil and gas make huge profits from selling the products responsible for causing climate change.

To help address this injustice, we propose a Carbon Levy - a global levy on all fossil fuel extraction, to be paid into an international Loss and Damage Mechanism to help the most vulnerable facing the worst impacts of climate change.

Of course it is crucial to stop runaway catastrophic climate change by phasing out fossil fuels and shifting to 100% renewables by the middle of the century. Investment in adaptation and resilience building will help reduce damage. But even with the most ambitious mitigation plans, the impacts of climate change are already going beyond what poor communities can adapt to. They need support to deal with these impacts now, and this need will only grow.

Traditionally, rich countries have blocked or slowed progress on Loss and Damage in the climate change talks, as they have objected to paying for it. A Carbon Levy can help to overcome this objection. It offers a substantial source of funds from the industry most responsible for climate change, an industry that can easily afford to pay such a Levy.

The Paris climate summit later this year plans to agree a blueprint for how the international community will deal with climate change. It must ensure that loss and damage is included in the new climate change agreement.

In Paris, governments must make clear that the poorest communities dealing with the worst impacts of climate change will receive support and funds to help them deal with a problem they did not create. The polluters must be held accountable for the damage their product is causing.



The Carbon Majors have extracted fossil fuels responsible for roughly two-thirds of climate change pollution.

MY COMMUNITY, ALONG WITH OTHERS WHO SUFFER CLIMATE CHANGE LOSS AND DAMAGE, DOES NOT DESERVE TO PAY THE COST ON THEIR OWN.

THE FOSSIL FUEL INDUSTRY IS MOST RESPONSIBLE FOR CLIMATE CHANGE AND SHOULD PAY THE COSTS OF THE DEVASTATION THEIR PRODUCT WREAKS.”

YEB SANO





CLIMATE DAMAGE VS PROFITS OF CARBON MAJORS

Poor and vulnerable communities are already facing the worst impacts of climate change.

Tropical storms are reaching previously unseen wind speeds, inflicting terrible devastation. Farmers face increasing droughts making it hard, or impossible, to grow enough food, threatening food security for rural and urban communities alike.

Rising sea levels salinate the soil of low lying islands and coastal areas, making it hard or impossible to

grow food; rising seas penetrate fresh water reserves and steal land, flood homes, schools and cemeteries. Communities that rely on glacial runoff are suffering from increasing floods as glaciers melt and, once the glaciers have melted, will then face increasing droughts.

Climate change costs on society will be significant. The faster we act - the more mitigation we undertake - the lower the costs will be. But at this stage loss and damage is unavoidable.

There is relatively low agreement on the projected costs of loss and damage on poor communities. This is partly because it is a new area, and the definition of what exactly constitutes loss and damage is yet to be agreed. There is also controversy in monetising all of the loss and damage from climate change.

There will be non-economic losses associated with loss and damage, and monetising them involves value judgements inherent in trying to assign monetary value to life, health, culture, society, and nature. What should be the “value” of watching your child swept away in a typhoon? Is the loss of an entire nation, and its culture, able to be monetised at all? Money cannot bring back the irreplaceable, and financial compensation, whilst necessary, should not be considered of equal “value.”

However, a review of estimates of loss and damage (see box) allows us to make a conservative estimate of USD \$50bn per year in the near term, increasing to USD \$70-\$100bn by 2050, for the group of 48 “Least Developed Countries (LDCs) alone. Loss and damage for all vulnerable developing countries can conservatively be estimated as at least double - USD \$100bn per year in the near term, increasing to at least USD \$200bn by 2050.

These costs rely on warming being kept below 2°C. Costs will increase dramatically above 2°C, and current climate action pledges lodged with the UN (INDCs) are predicted to result in around 2.7°C - and that’s only if everyone meets their pledges.

The AMCEN/UNEP Africa’s Adaptation Gap 2 Report (2015) estimates that if all cost-effective adaptation is realised, Africa will still suffer large “residual” damages (loss and damage), estimated to be double the adaptation costs in the period 2030-2050.

Therefore for Africa alone, loss and damage is estimated at ~\$100bn per year by 2050 if we keep warming below 2°C and at least double that if warming goes above 4°C.

The UNEP Adaptation Gap Report (2014) says the indicative cost of adaptation and the residual damage (loss and damage) for the LDCs is likely to be US\$50 billion/year by 2025/2030 and possibly double this value (US\$100 billion/year) by 2050, even if warming is limited to 2°C.

The Climate Vulnerability Monitor 2 (2012), from DARA and the Climate Vulnerability Forum, written by more than 50 scientists, economists and policy experts, and commissioned by 20 governments, found that climate change is already causing 400,000 deaths each year (98% of which are in developing countries), and that climate change caused net global economic losses of \$609 billion in 2010, expected to increase to \$4.3 trillion by 2030. 80-90% of these costs are projected to fall on developing countries, with the LDCs suffering the worst.

Hope (in Parry et al. 2009) has estimated that by 2060 global loss and damage (residual costs) from climate change will be about US\$1.2 trillion per year (measured in US dollars from 2000).

**THE CLIMATE VULNERABILITY MONITOR 2
FROM DARA & THE CLIMATE VULNERABILITY
FORUM ESTIMATES GLOBAL LOSSES FROM
CLIMATE CHANGE IN THE FOLLOWING AREAS:**

"JUST 90 FOSSIL FUEL PRODUCERS ARE RESPONSIBLE FOR 2/3 OF GLOBAL CARBON EMISSIONS IN OUR ATMOSPHERE, RECEIVING OBSCENE SUBSIDIES AND MAKING MASSIVE PROFITS IN THE PROCESS. WHILE THE WORLD'S POOREST COMMUNITIES BEAR THE TRUE COSTS OF CLIMATE CHANGE.

A FOSSIL FUEL EXTRACTION LEVY IS AN IMPORTANT PART OF TURNING THIS OUTRAGEOUS SITUATION AROUND."

KATE RAWORTH, INVENTOR OF DOUGHNUT ECONOMICS, SENIOR VISITING RESEARCH ASSOCIATE, ENVIRONMENTAL CHANGE INSTITUTE, OXFORD UNIVERSITY

	Net 2030 \$USD Billion 2010	Net 2010 \$USD Billion 2010
Droughts	18	4
Floods & landslides	94	10
Storms	100	15
Wildfires	-	-
Biodiversity	389	78
Desertification	20	4
Heating & cooling	-77	-33
Labour productivity	2,400	311
Permafrost	153	31
Sea level rise	526	86
Water	13	14
Agriculture	367	50
Fisheries	168	13
Forestry	44	6
Hydro energy	-24	-4
Tourism	-	-
Transport	7	1
TOTAL	4,345	609



PROFITS OF BIG COAL, OIL AND GAS

These estimates of loss and damage cost can be compared with the profits of the fossil fuel companies whose products are responsible for the majority of carbon emissions.

Last year (2014) the top two fossil fuel companies alone—Chevron and ExxonMobil—made more than \$50 billion between them.

The top 13 fossil fuel companies made more than \$100 billion in profits in 2014.

These profits are made while these companies do not pay for any of the climate damages for which their products are responsible.

		2013 PROFITS (\$USD Bn)	2014 PROFITS (\$USD Bn)
CHEVRON	USA	21.423	19.241
EXXONMOBIL	USA	32.580	32.520
BP	UK	23.449	3.778
ROYAL DUTCH SHELL	NETHERLANDS	16.371	14.874
CONOCOPHILLIPS	USA	9.156	6.869
PEABODY ENERGY	USA	-0.525	-0.787
TOTAL SA	FRANCE	11.228	4.244
CONSOL ENERGY INC	USA	0.660	0.163
BHP BILLITON LTD	AU/UK	11.223	13.832
ANGLO AMERICAN	UK	-0.961	-2.513
RWE	GERMANY	-2.757	1.704
ENI SPA	ITALY	6.812	1.726
RIO TINTO PLC	AU/UK	3.665	6.527
TOTAL		\$132 BILLION	\$102 BILLION



What the 13
largest fossil fuel
companies made
in profit in 2013

(\$USD BILLION)

\$132



Estimated
annual loss and
damage for the
48 least
developed
countries

(\$USD BILLION)

\$50





WHILE GLOBAL ESTIMATES OF LOSS AND DAMAGE ON POOR COUNTRIES AND COMMUNITIES CAN VARY, THREE RELEVANT EXAMPLES ARE HIGHLIGHTED HERE.

TYPHOON HAIYAN (YOLANDA) THE PHILIPPINES

NOV
2013

In November 2013, just as the UN climate talks began in Warsaw, Typhoon Haiyan (or Yolanda as it was called locally) devastated the Tacloban region of the Philippines.

As a country that has frequent typhoons and storms, the government and locals had many coping mechanisms in place.

However, with sustained wind speeds up to 195mph (314kph), Typhoon Haiyan was the strongest ever tropical storm to make landfall. So traditional coping mechanisms were blown away.

Typhoon Haiyan forced four million people from their homes, destroyed or damaged one million houses and killed 7,354 people.

The International Disaster Database (EM-DAT) quantified the damage of Typhoon Haiyan at \$10 billion, of which very little - only USD \$300-700 million - was likely to be covered by insurance.

That year, Chevron recorded almost twice that amount in profits: USD \$21.4 Billion.

"MY FAMILY AND COMMUNITY IN TACLOBAN KNOW ALL TOO WELL THE COST OF CLIMATE CHANGE." - YEB SANO

**Typhoon Haiyan
Cleanup Costs**
(\$USD Billion)

\$10.0



**Chevron Profits
Fiscal Year 2013**
(\$USD Billion)

\$21.4





AUG

2007

In 2007, the Autonomous Bougainville Government & the government of Papua New Guinea (PNG) decided to resettle the 6,000 inhabitants of the Carteret Islands and three other island atolls to the larger island of Bougainville.

This decision was in response to increasing land loss, salt water inundation and food insecurity. Modelling by the governmental authorities drew heavily upon work done by community based group, Tulele Peisa (which means “sailing the waves on our own”) that aims to “maintain our cultural identity and live sustainably wherever we are.”

The relocation from the Carteret Islands is one of the world’s first organised resettlement movements of forced climate

change migrants. A task force committee created a plan to resettle 50% of the population by 2020.

The people of the Carteret Islands live a traditional way of life which the programme seeks to protect through finding each family five hectares of land: one ha for housing and personal gardens, three ha for livelihood through farming of cash crops and one ha for reforestation. It was estimated by Tulele Peisa in a report by Displacement Solutions that USD \$5.3 million is required for the period 2009 - 2019 to ensure that the basic needs for a successful resettlement are met. Another estimate by Displacement Solutions provides that USD \$6,500 is required to secure land and housing for each family.

Despite clear recognition by PNG authorities of the need to relocate, insufficient funding has been secured to date. The PNG government provided 2 million kina (around USD \$900,000).

The Roman Catholic Church has provided 80 ha for families to settle upon.

While the Carteret Islands needs USD \$5.3 million to relocate, **ExxonMobil recorded USD \$32.5 Billion in profits in 2014 alone.**

A comparison to this relocation is the Inuit village of Kivalina (in the United States’ Alaska) which needs to relocate due to erosion caused by wave action and sea storms.

The US Army Corps considered various relocation options and found that the costs of resettlement could range from USD \$154.9 million to \$251.5 million. Kivalina has 402 residents who reside in 70 homes. Adequate funding has not been secured and the village of Kivalina unsuccessfully sought to recover costs through a climate change lawsuit against energy companies (Kivalina v ExxonMobil et al 2008).

"WE NEED A SOLUTION TO CLIMATE CHANGE FOR MY BEAUTIFUL ISLAND HOME OF THE SEYCHELLES ON THE FRONT LINE OF SEA LEVEL RISE, AND FOR EVERY COASTAL CITY AND COMMUNITY IN THE WORLD. A KEY PART OF THE SOLUTION IS INNOVATIVE, SUSTAINABLE CLIMATE FINANCE - A FOSSIL FUEL EXTRACTION LEVY COULD PROVIDE A NEW SOURCE OF FINANCE, AT SCALE, AND IN A FAIR WAY." - RONNY JUMEAU

**Carteret Islands
Re-location Costs
2009- 2019**
(\$USD Billion)

**ExxonMobil Profits
Fiscal Year 2014**
(\$USD Billion)





DROUGHT KENYA

2008

2011

Climate change poses an ongoing and serious threat to Kenya's economy.

Already, it accounts for a loss of approximately US\$0.5 billion per year, which is equivalent to 2% of the country's GDP. This cost is expected to rise and could eventually claim 3% of Kenya's GDP by 2030.

From 2008 to 2011 the Horn of Africa suffered from a prolonged drought, affecting Djibouti, Ethiopia, Kenya, Somalia, Ethiopia, Uganda and other countries. The UN called it the worst drought in 60 years.

At its peak it left 13.3 million people with food shortages and led to a large number of deaths.

In Kenya, it was the poorest people who suffered the greatest losses.

Across the 4 year period of drought, the Government of Kenya estimated losses of \$12.1 billion in total. Major areas of loss included: agriculture \$1.5bn; livestock \$8.7bn; water and sanitation \$1.1bn; and other areas including agro-industry, fisheries, nutrition, health, education and energy.

In Kenya, it was the poorest people who suffered the greatest losses. As the drought lasted more than four years, poverty increased in both qualitative and quantitative terms, and Government of Kenya had to divert funds and significantly increase its efforts to reduce poverty in the medium- to long-term.

**Estimated Costs
of Kenyan Drought
2008 - 2011**
(\$USD Billion)

\$12.1



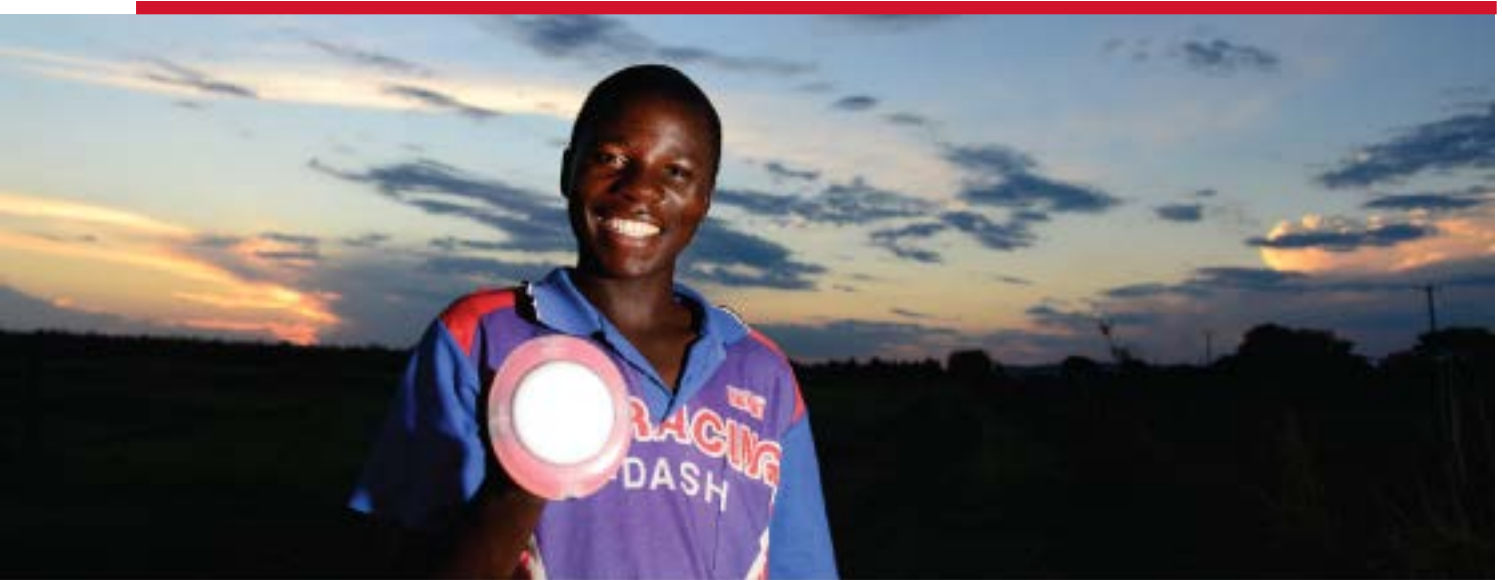
**Royal Dutch Shell
Profits 2008 - 2011**
(\$USD Billion)

\$90.2



"THE CLIMATE JUSTICE PROGRAMME'S PROPOSAL FOR A LEVY ON THE CARBON MAJORS TO COMPENSATE FOR CLIMATE DAMAGES IS ELEGANT AND AN IMPORTANT PART OF THE SOLUTION."

NAOMI KLEIN

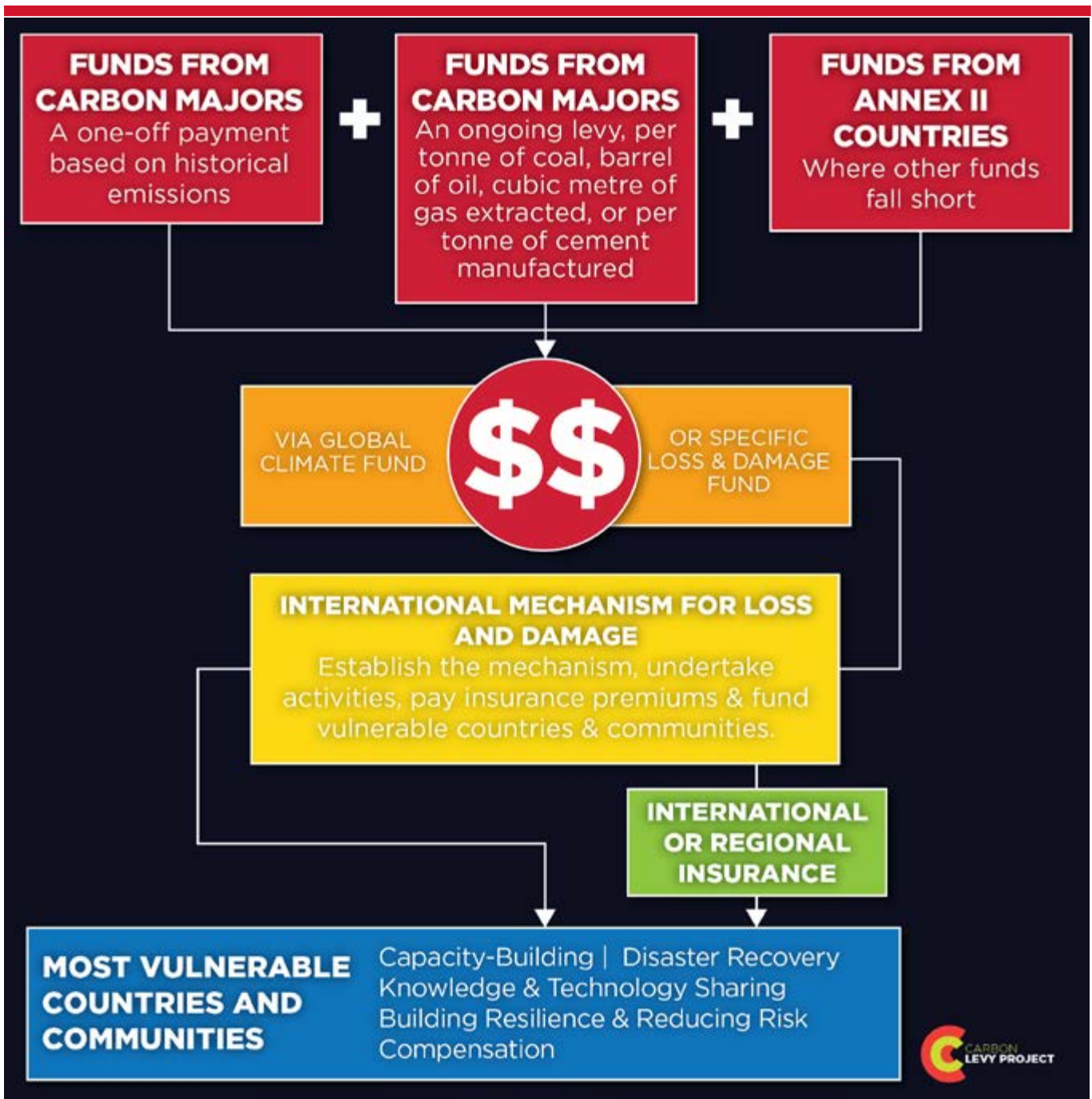


HOW THE CARBON LEVY WOULD WORK

The Carbon Levy Project proposes that the fossil fuel industry—responsible for the majority of climate emissions—should pay for the damage their product is doing via a fossil fuel extraction levy, applied globally to all extraction of coal, oil and gas.

Climate finance is already inadequate, with a huge gap between what is needed and what is provided. The costs of climate change are currently falling upon the poorest and most vulnerable, while the fossil fuel industry makes trillions of dollars in profit.

A Carbon Levy would provide a new source of finance - additional to aid budgets - that could help to fill the climate finance gap.



Existing international law, including the Polluter Pays Principle, the No Harm Rule, and the Right to Compensation provides the basis for such a system. The Carbon Levy proposal draws from precedents such as the IOPC, the oil spill compensation regime, which collects levies from companies that ship oil internationally to use as compensation in the incidence of oil spills.

Whilst these precedents are imperfect, they exist in other areas. The Carbon Levy proposal offers an improved version.

The Carbon Levy would apply to all coal, oil and gas extracted - regardless of who is extracting it, or whether it is a company or a state-owned corporation. We propose the Levy could start at a low level of roughly \$2 a tonne of CO₂e, in order to raise \$50bn a year initially. This would need to increase at 5-10% each year, as the costs of loss and damage increase. We have not calculated what this would mean on a per barrel of oil, tonne of coal or cubic metre of gas (but welcome input from others in a position to do so).

The funds should be transmitted directly to the international mechanism for loss and damage (or its financial body), and this body would decide how to use the funds to best support vulnerable developing countries and poor communities facing loss and damage from climate change. It might use them to pay for insurance premiums, to fund research, or to pay for reconstruction or relocation.

In order to ensure the application of the Carbon Levy is equitable, countries at a low level of responsibility and capability would be able to keep any levy that is applied to fossil fuels extracted within their borders for domestic climate change use. This would not

necessarily rule out them applying for further funds from the international mechanism for loss and damage.

The Carbon Levy has the advantage of tapping a new source of finance, that does not come from Treasuries. Progress on loss and damage has been slow, in large part because rich countries have objected to the idea of paying for it.

It was only the devastation of Typhoon Haiyan in the Philippines that saw the Warsaw International Mechanism for Loss and Damage established in 2013. But progress since has been slow. A new source of finance from a levy on Big Oil, Coal and Gas Producers could unlock the main objection by rich countries to including loss and damage in a new Paris agreement.

This fossil fuel extraction levy must be part of a phase out of fossil fuels and a phase in of renewable energy by the middle of the century. A complementary step is to quickly move to end fossil fuel subsidies. The IMF calculates that the fossil fuel industry is supported by as much as \$5.3 trillion in subsidies, which includes direct subsidies and indirect costs (e.g. health costs). These subsidies exacerbate the threats posed by fossil fuels, and must be removed.

The Carbon Levy taps a new source of finance—big oil, coal and gas—and could unlock the objection from rich countries that they would have to pay for loss and damage.



Fossil fuels are fuelling climate change, causing massive loss and damage to people's lives.

The damage caused by fossil fuels goes beyond climate change to encompass impacts including loss of human lives from air, water and soil pollution, loss of biodiversity, deforestation, acidification of oceans and competition for water.

The world's poorest communities are paying for climate change while Big Oil, Coal and Gas earn

trillions of dollars in profits. In 2013, when the Philippines suffered the damage caused by Typhoon Haiyan, which cost approximately US\$10 billion, killed 7,354 people and destroyed or damaged 1 million homes, Chevron recorded \$21.4 billion in profits.

Each year, Kenya experiences around \$0.5 billion in economic costs from climate change. From 2008 to 2011 an extreme drought cost Kenya \$12.1 billion in damages - and set back Kenya's efforts to reduce poverty. Meanwhile, Royal Dutch Shell recorded an astounding \$90.2 Billion from 2008 to 2011.

The Carteret Islands needs \$5.3 million to relocate its community from its low lying islands in Papua New Guinea. The community has been unable to raise the funds, yet ExxonMobil recorded \$32.5 Billion in profits in 2014.

The Carbon Levy is not the solution to all - fossil fuels need to be phased out by the middle of the century; and rich country governments have a responsibility to provide sufficient climate finance for both adaptation and for loss and damage. Yet the Carbon Levy can, and should, make a significant contribution.

The profits of Big Oil, Coal and Gas are earned through the externalisation of the costs of climate change upon all of us, but particularly the most vulnerable people who are at the forefront of climate change.

These disadvantaged communities and countries pay the real costs of fossil fuel extraction, while Big Oil, Coal and Gas continue making obscene levels of profits. Fossil fuel companies are not being held responsible for their contribution to the damage being experienced.

A fossil fuel extraction levy is needed to fund the loss and damage mechanism, and to ensure that the cost of climate change is shifted from the world's most vulnerable people to Big Oil, Coal and Gas.



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HOW THE CARBON LEVY WOULD WORK

For further information on how the levy would work see: <http://climatejustice.org.au/issue/carbon-majors/> and http://climatejustice.org.au/wp-content/uploads/2015/06/CJP-HBF-big_oil_coal_and_gas_producers_must_pay_for_their_climate_damage.pdf.

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