

A DANGEROUS DISTRACTION

WHY OFFSETS ARE A MISTAKE THE U.S. CANNOT AFFORD TO MAKE



**Friends of
the Earth**

FOREWORD

As the United States moves closer to taking federal action on climate change, it should avoid the mistake of relying on international offsets for carbon emission reductions. This report demonstrates that offsetting, particularly international offsetting, does not work and will not work. Offsetting does not lead to promised additional emissions cuts in developing countries while it delays essential structural change in the U.S. economy and in turn slows the growth of green jobs. Offsetting institutionalizes the idea of cuts in either the global North (developed countries) or the global South (developing countries), while science demands simultaneous reductions in both.

Negotiations, both domestic and international, are moving painfully slowly, despite the science demanding urgent carbon cuts. The United States and other developed countries are reluctant to set reduction targets consistent with what the science demands and provide necessary financial resources to developing countries.

This report highlights the inequalities of the offset approach – an approach that allows people in rich

“OFFSETTING DOES NOT WORK, WILL NOT WORK AND MUST BE SCRAPPED.”

countries to carry on polluting while requiring unfair reductions in poor countries.

Offsetting does not work, will not work and must be scrapped. Instead the world needs developed countries, especially the United States, to cut their own emissions first and fast and provide financing for adaptation and mitigation in developing countries. This course of action is not a threat to the well-being of Americans; it is a vital step towards new jobs, new industries, a healthier global economy and a safer and more just world.

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ABOUT THIS REPORT

This report is for decision makers, media and campaigners working towards robust and fair solutions to climate change in U.S. policy discussions and ahead of the UN climate talks in Copenhagen in December 2009. This version of the report has been adapted from a previous release in the United Kingdom by Friends of the Earth England, Wales, and Northern Ireland.

There is a growing and credible body of evidence and opinion that offsetting is not working; that it is undermining efforts to prevent dangerous climate change and support sustainable development; that it is profoundly unjust; and that it cannot successfully be reformed.

This report draws together some of the key evidence to ensure this view is fully reflected in emerging US climate policy, public debate and international negotiations.

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EXECUTIVE SUMMARY

The United States, the world's largest historical emitter of greenhouse gases into the atmosphere, must avoid the false allure of international offsetting as a means to meet emission reduction targets.

The theory of international offsetting is enticing: polluters in the U.S. can avoid making costly emission reductions locally by paying for projects in the developing world to make equivalent emission reductions at a fraction of the price. Globally, overall emissions still fall while maximizing economic efficiency.

In practice, offsetting is having a disastrous impact on the prospects for averting catastrophic climate change. It is vital that the inherent and systemic flaws in the approach are recognized as U.S. policymakers debate climate legislation. These problems cannot be dealt with by simply reforming current offsetting schemes; instead, completely new approaches are needed that are effective and just.

The idea of offsets grew out of the United Nations climate talks in Kyoto in 1997, where most developed countries, though not the United States, agreed to reduce their greenhouse gas emissions. Negotiators introduced offsetting to offer some flexibility in the way targets could be met.

Since then, offsetting has grown quickly, in particular in the form of the Clean Development Mechanism (CDM). Despite many well-publicized problems,¹ CDM offsets are now predicted to deliver more than half of the European Union's planned carbon reductions to 2020.

Offsetting in general is poised for further expansion. The American Clean Energy and Security Act (ACESA) passed by the U.S. House of Representatives this past summer would allow up to 2 billion offset credits each year. Other developed

countries are also clamoring for more offsetting opportunities as the world prepares for crucial United Nations climate talks in Copenhagen at the end of 2009. Internationally, more offsets may come online from new sources:

- from forests, through proposed offset-based Reduced Emissions from Degradation and Deforestation (REDD) mechanisms.
- from sectors that the CDM does not currently cover, such as nuclear power.
- under new sectoral frameworks.

Offsetting has gone from being a minor, experimental idea to an approach which, despite its major negative impacts on countries' climate-change strategies, is set to expand further.

The five central arguments against international offsetting are that it:

- 1 counts action in rich countries as part of the cuts promised in poor countries, although the science is clear that action is needed in both developed and developing countries.
- 2 cannot guarantee the same level of reductions as would have happened without offsetting.
- 3 is causing major delays to urgently needed low carbon economic transformations in developed countries.
- 4 does not ensure positive sustainable development in, or appropriate financial transfers to, developing countries.
- 5 is profoundly unjust, fundamentally flawed and cannot be reformed.

For these reasons offsetting must not be included in U.S. climate legislation or expanded at Copenhagen. New proposed offsetting schemes must be dropped from negotiations, and existing offsetting mechanisms need to be scrapped.

This report analyzes offsetting, using mainly the example of the largest scheme, the Clean Development Mechanism (CDM). However, this analysis is largely applicable to other types of offsetting as well.

INTERNATIONAL OFFSETTING IS NOT REFORMABLE

Most international offsets are a swap of an emissions cut in a rich country for a cut in a poor country. But action in both is needed. International offsetting results in fewer emissions reductions globally. Moreover, failure to cut emissions in developed countries also results in delays in essential infrastructure changes necessary for deeper reductions in the future. Offsetting results in fewer emissions cuts; no amount of reform can alter this.

The problems of proving "additionality" – that the developing country project would not have happened without the funds obtained from offsets – are considerable. The U.S. Government Accountability Office (GAO) says it is impossible to know with certainty whether a project is additional.

Offsetting credits are created against hypothetical baselines – they are not provable and therefore cannot be guaranteed.

The report finds that:

1. International offsetting delivers lower total greenhouse gas cuts than the science says are needed to avert catastrophic climate change.

The Intergovernmental Panel on Climate Change (IPCC) says that developed countries need to make major greenhouse gas cuts and, in addition, that developing countries need to make cuts on so-called business-as-usual baselines (emissions levels). But offsetting means that action in poor countries can be counted as part of the action needed in rich countries. Offsetting therefore institutionalizes the idea of making cuts in one place or the other, when the science, including the IPCC findings, is clear that action in both is needed.

2. International offsetting cannot guarantee the same level of carbon cuts in the poor country as would have been made in the U.S.

- i. It is almost impossible to prove that most offsetting projects would not have happened without the offset finance – i.e. that they are “additional”. A 2009 U.S. GAO’s review of offsets said “it is impossible to know with certainty whether any given project is additional.”² Without this guarantee the net effect is that greenhouse gas emissions are increasing – because the international offsetting allows the developed country to continue polluting. The climate loses.
- ii. Even if a project were additional, it is often impossible to calculate accurately how much carbon a project is saving. This is because credits are calculated by judging action against hypothetical futures – things that haven’t happened.

3. International offsetting delays necessary infrastructure changes in the U.S. and other developed countries.

It weakens incentives to implement strong climate policies or prevent high-carbon investments. In order to prevent catastrophic climate change, the United States and other developed countries must make major investments now and switch to a low carbon economy in the next 10 years. In spite of this, offsetting provisions in recent legislation passed in the House of Representatives could allow domestic polluters to delay taking strong action up until 2029. Locking in a high-carbon infrastructure will have severe consequences for the global climate and for our economy.

4. Offsetting is not delivering for developing countries.

- i. In many cases offsetting is not helping developing countries take a low-carbon path. In fact, a large proportion of CDM revenues is subsidizing carbon-intensive industries or fossil-fuel projects.
- ii. The CDM creates financial incentives for developing countries to not implement strong climate policies. This is because only projects that are not required by regulation are supposed to qualify as CDM projects.
- iii. The financial flows produced by offset credits are far lower than those required to adequately or effectively support low-carbon development. Developing countries must be given far greater support – not least because of the massive historic debt owed to them by developed countries, which have overwhelmingly caused the climate change crisis. Offsetting, however, is not the tool for this job.
- iv. There are severe equity impacts for developing countries if developed countries offset even part of

their emission reduction targets. Offsetting deepens inequality in per capita carbon consumption between developed and developing countries.

In summary, the CDM and other types of offsetting mechanisms like those proposed in the American Clean Energy and Security Act (ACESA) are flawed and highly problematic tools for tackling climate change. They are a dangerous distraction from the urgent business of decarbonizing the world’s economies. They are not able to be reformed, and should be scrapped.

The U.S. Government should:

1. Commit to reducing its own emissions by at least 40 percent below 1990 levels by 2020, without offsetting.
2. Reject proposals for new and expanded offsetting schemes, and work to scrap existing offsetting programs like the CDM.
3. Reject plans to introduce forest offsets, and instead negotiate effective and fair mechanisms to protect the Earth’s forests that do not involve offsetting.
4. Negotiate a new financial mechanism under the authority of the UN Framework Convention on Climate Change to ensure adequate financial flows to developing countries to support their transition to a low-carbon future.
5. Provide just compensation to developing countries for adaptation to the unavoidable impacts of climate change.
6. Not count financial flows from offsetting against public financial obligations to poor countries for mitigation and adaptation.

1 CLIMATE CHANGE: THE SCALE OF THE CHALLENGE

The need to reduce greenhouse gas (GHG) emissions is desperately urgent. Scientists tell us we are hovering at the edge of dangerous climate change tipping points. Despite the UN Framework Convention on Climate Change (UNFCCC) — ratified by the United States in 1992 — global emissions of GHGs have continued to increase, and have even accelerated since 2000.³

All signatories to the UNFCCC (including the United States) have committed to the overall objective of the Convention as stated in Article 2 — to prevent dangerous climate change. It is accepted that an average global temperature rise of more than 2 degrees Celsius (C) compared to pre-industrial times would cause

“CLIMATE CHANGE IS POTENTIALLY THE GREATEST CHALLENGE TO GLOBAL STABILITY AND SECURITY, AND THEREFORE TO NATIONAL SECURITY.”

dangerous and even catastrophic impacts. Exceeding 2 degrees Celsius will create water scarcity for billions of people, put billions at risk of hunger, make hundreds of millions homeless because of flooding and threaten the very existence of low-lying island nation states through sea-level rise.

Mitigating the effects of climate change is also increasingly recognized as a security imperative. During a 2007 hearing on the security implications of climate change before the Investigations and Oversight Subcommittee of the House Committee on Science and Technology, former Army Chief of Staff General Gordon R. Sullivan (Ret) testified that, “After listening to leaders of the scientific, business,

and governmental communities, my colleagues and I came to agree that global climate change is and will be a significant threat to our national security and in a larger sense to life on earth as we know it to be.”⁴

Recent research on climate tipping points -- which identifies the temperature rise after which, for example, the Greenland ice sheet melt is likely to become irreversible -- suggests the 2 degrees C target is prudent.⁵ Maximizing the chance of keeping well below 2 degrees C is a moral imperative for all humanity.

A synthesis of climate models published in 2006 suggests that a concentration of 450 parts per million by volume (ppmv) of carbon dioxide equivalent (CO₂e) gives a 50 percent chance of not exceeding 2 degrees C. This should be regarded as an absolute maximum concentration: a 50 percent chance is not good odds when the climate is at stake.

Research by the UK’s Tyndall Centre for Climate Change Research has suggested that to achieve this requires global CO₂e emissions to peak in 2015 and fall by 4 percent a year thereafter. The emissions cuts indicated by this trajectory should be considered as the minimum required. While the Tyndall research indicates the scale of overall reduction required, the proportion of cuts made by each

country will be decided by international negotiations.

Recent papers from the Intergovernmental Panel on Climate Change (IPCC) authors suggest that even 450 ppmv CO₂e will require a 25-40 percent reduction in emissions from developed (Annex I) countries below 1990 levels by 2020 and a 15-30 percent reduction below baseline for developing (non-Annex I) countries by 2020.⁶ The ranges summarized by the IPCC are “assumed to be achieved domestically by both groups of countries”.

However, this allocation of responsibility is itself deeply unjust to developing countries, given historic contributions to cumulative greenhouse gas emissions.

Developing countries have called for greater ambition from developed countries at the U.N. climate change conference in December 2009. Copenhagen. The G77, a negotiating block of over 133 countries, and China, say “much deeper reduction commitments are required and ... must reflect their historical responsibility as well as evolving scientific evidence”.⁷ In August 2009 at UNFCCC negotiations The Alliance of Small Island States (AOSIS) and Least Developed Countries (LDCs) --representing 80 countries -- jointly demanded that developed countries “...reduce their greenhouse gas emissions by at least 45 percent below 1990 levels by 2020.”⁸

2 POLITICAL CONTEXT: WHY DECISIONS ON OFFSETTING ARE IMPORTANT

The American Clean Energy and Security Act (ACESA) passed in the House of Representatives in June 2009 would allow up to 2 billion tons of offsets each year. Figure 1 clearly shows how this massive amount of offsets, if used in their entirety, could actually allow polluters in the U.S. to increase their emissions until 2029.⁹

Scientists are calling for a minimum emission reduction of 80% compared to 1990 levels by 2050 in developed countries if we are to have a reasonable chance in avoiding disastrous levels of climate change. ACESA proposes to reduce emissions by 73-75 percent below 2005 levels by 2050. This equates to reductions of about 68-71 percent below 1990 levels by 2050.¹⁰

However, the use of offsets in the House bill would allow major polluters

to reduce their actual emissions in the U.S. by only 50 percent by 2050.

The effect of such an increase in the supply of offset credits would be to further weaken economic incentives to make real domestic emissions reductions in the U.S. and, rather, transfer much of the responsibility of reducing emissions to developing countries.

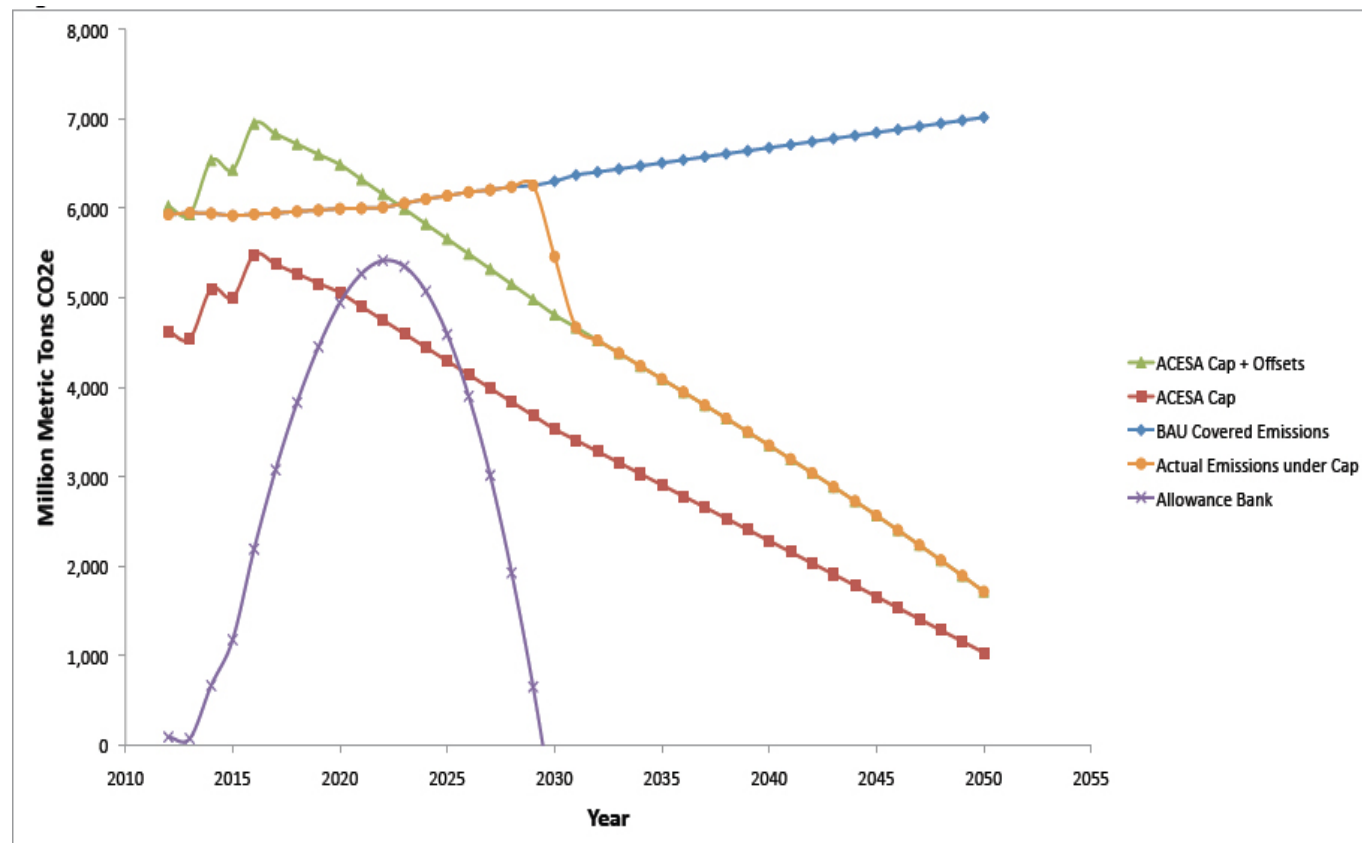
International offsetting proposals

The international climate talks

in Copenhagen in December 2009 are a crucial opportunity to forge a stronger global agreement to prevent catastrophic climate change. International offsetting under the UN negotiations through the Clean Development Mechanism (CDM) has proved very problematic, and yet there are strong efforts underway to further expand offsetting in the current round of negotiations.

Developed countries (known as “Annex I” countries in the UNFCCC) agreed on emission reduction targets up until 2012 as part of the Kyoto Protocol’s first commitment period. There is a legal requirement for developed countries to set further targets for subsequent commitment periods after 2012. The Protocol allows developed countries to use

Figure 1: Covered fossil fuel emissions under ACESA



offsetting through the CDM as a way to meet those targets. The CDM runs to 2012 in its current form, and may continue beyond that date with amendments subject to further negotiations. The UNFCCC is deliberating proposed changes to the CDM and considering new offsetting schemes in the run-up to the Copenhagen.¹¹

It is widely acknowledged that there are many failings with the CDM (see sections 4 and 5). In spite of this, the focus of CDM reform discussions is often on how to reduce regulation of the CDM and increase the supply of credits. Other proposals aim to create entirely new offsetting schemes. Consequently, the thrust of negotiations is creating space for even less real action on climate at a time when there must be more.

The main offsetting proposals on the UNFCCC negotiating table involve:

- extending offsetting to emissions sequestration through avoided deforestation, particularly under the UN's new Reduced Emissions from Deforestation and Degradation program (REDD).
- lifting bans on the types of projects that can be included, such as nuclear power.
- moving away from project-based CDM to larger sectoral approaches (i.e. establishing industry level baselines and measuring reductions against this broader benchmark).

Offsetting has become a cornerstone of developed countries' strategies in achieving emission reduction targets. Commitments to significant reductions are usually achieved by purchasing international offsets, thus enabling polluters to avoid actually having to make the reductions locally. This strategy threatens to make a mockery of science-based target setting.

EU strategy for increasing offsetting

The EU climate and energy package established a framework to allow more than half of EU emissions reductions up to 2020 to be offset to developing countries.

The European Commission strategy paper, Towards a Comprehensive Climate Change Agreement in Copenhagen, states that the EU seeks to align policy with other developed countries in "generating demand for offset credits".

The EU has also proposed new sectoral offsetting mechanisms for agreement in Copenhagen.¹² Sectoral crediting is intended to allow whole sectors in certain developing countries to generate carbon credits through supposed reductions in their sector's emissions growth. This is in essence an expanded CDM, creating a higher volume of credits than project-based CDM against a hypothetical baseline.

The overall EU strategy is to shift responsibility for approximately half of

its emissions reductions to developing countries through offsetting, thereby avoiding an equivalent domestic effort.

Considering the EU's current proposed reduction target is only 20 percent by 2020, securing a steady supply of offset credits would effectively halve an already dangerously low level of ambition and undermine an already weak policy framework. These problems are likely to be exacerbated by EU proposals to allow Member States to bank credits (i.e. buy credits now and use them later).¹³

3 INTERNATIONAL OFFSETTING: WHAT IS IT AND HOW SIGNIFICANT IS IT?

International offsetting is the process whereby rich countries pay poor countries to undertake projects that purportedly cut carbon emissions – in effect avoiding emissions reductions in the rich countries.

Offsetting emerged as a small-scale experimental idea agreed to by embattled negotiators in the last hours of the Kyoto Protocol talks in 1997. It was intended to give developed countries some flexibility in meeting their targets. Offsetting would be delivered via two mechanisms – the Clean Development Mechanism and Joint Implementation (JI). Joint Implementation is an offsetting scheme within developed country parties to the Kyoto Protocol that does not involve developing countries.

Proponents argued that offsetting would:

- be an economically efficient way of making carbon cuts globally.
- transfer money from richer to poorer countries.
- help with technology transfer and development in poorer countries.

In the subsequent 12 years, the CDM and other types of offsetting have, despite major and well-publicized problems, become much larger mechanisms. For example, as just mentioned, the European Union's climate change strategy allows more than 50 percent of its planned emissions reductions to 2020 to come from offsetting.

The CDM allows countries with binding targets under the Kyoto Protocol to buy credits from developing countries that do not have Kyoto targets but are supposedly implementing carbon-cutting projects. The credits are given units of tons of carbon dioxide equivalent (tCO₂e).¹⁴ Rules have been established that are intended to ensure genuine emissions reductions – although this report shows that they do not work.

This report draws heavily on the experience of the Clean Development Mechanism for three reasons:

- First, the CDM is the world's biggest and most established regulated offsetting mechanism.
- Second, the CDM – and its smaller companion offset mechanism, JI – are the only offsets allowed in the European Union Emissions Trading Scheme (EUETS); the latter is the world's largest carbon-trading scheme, accounting for around three-quarters of the value of traded carbon in 2008.¹⁵
- Third, it is very likely that a substantial portion of international offsets under ACESA would be facilitated through the CDM or its successor under a post-2012 framework.

What types of offsetting are there?

The CDM is the world's largest offset mechanism, accounting for more than four in every five tons of carbon offsets traded. Table 1 shows the volume of offset carbon traded in 2007.¹⁶

Table 1: Breakdown of carbon offset trading market, by volume of transactions¹⁷

Market	Transaction volume (million tonnes CO ₂ e) 2008
Voluntary	123
Primary CDM	400
Secondary CDM	622
Joint Implementation	8
Total	1153

What project types are there?

There is a variety of different offset project types, such as:

- **Sequestration:** projects that trap carbon – for example, forest projects. Only a limited range of forest projects are currently allowed under CDM rules.
- **Greenhouse gas destruction:** for example, potent green house gases like nitrous oxide (N₂O) or hydrochlorofluorocarbons (HCFCs) emitted from factories, and turning them into more climate-benign molecules.
- **Energy efficiency:** upgrades to power plants and more efficient industrial processes
- **Energy projects:** for example wind, biomass, solar, coal, gas, and hydro-electricity schemes.

Table 2 shows the six biggest categories of projects predicted to be in the CDM in 2012.¹⁸

Table 2: Origin of CDM projects expected by 2012

Type of project	Percentage of all CDM credits (CERs) (%) *
Hydrofluorocarbon (HFC) destruction	17
Hydro-electricity	17
Electricity from waste gases or energy	10
Energy from landfill gas	9
N ₂ O destruction	9
Energy from wind power	9
Other	29

Note: Solar power is predicted to be generating 0.1 percent of CERs.

* Percentage of all credits from the start of CDM up to 2012.

Who hosts the projects and who buys the credits?

The four countries predicted to generate the most CDM credits in 2012 are shown in Table 3.¹⁹

Table 3: Biggest generators of CDM credits predicted for 2012

Country	Percentage of all CERs
China	53
India	16
Brazil	6
South Korea	3

Note: Africa is predicted to be generating 3 percent of all CERs by 2012.

CDM: how significant is it?

The use of CDM is growing rapidly and is predicted to account for a significant proportion of overall carbon reduction targets up to 2020. The UN Environment Programme (UNEP) estimates that 5.2 billion CDM Certified Emission Reduction (CER) credits will be issued between 2009 and 2020.²⁰

The creation of a new carbon trading system in the U.S. will very likely create a huge new demand for CERs. For example, ACESA could allow up to one and a half billion tons of emissions reductions each year to come from international offsets, many of which could come from the CDM. In addition, new climate commitments coming out of Europe rely heavily on international offsets to meet emissions reductions requirements.

For example, in the EU climate package agreed in December 2008, sectors outside the EU Emissions Trading Scheme – such as surface

transport – can meet 73 percent of their carbon reductions required for 2013-2020 by buying CERs. Sectors in the EUETS can meet 50 percent of the effort from 2008 to 2020 with CERs, representing 1.6 billion tons CO₂e. It is extremely likely that all these credits will be used if available, as CERs are cheaper than EUETS allowances.

The EU has committed to reduce its emissions by 20 percent by 2020; in practice, however, with offsetting it is cutting its own emissions by only 10 percent.

In summary, the high volume of CERs heavily reduces the effort required of developed countries to reduce emissions. Probing the effectiveness of CDM credits is therefore crucial to determining whether offsetting mechanisms are in fact a successful strategy for preventing dangerous climate change.

4 WHY OFFSETTING DOESN'T WORK

This section outlines three structural reasons why offsetting mechanisms are flawed and unreformable. It also demonstrates the impacts of relying on offsetting.

4.1 LESS CARBON IS CUT: REDUCTIONS IN ONE PLACE, NOT BOTH

The IPCC has said²¹ that in order to keep global greenhouse gas concentrations low enough to offer the greatest chance of avoiding dangerous climate change, developed countries must make major emission cuts and developing countries must significantly deviate from projected baseline emissions trajectories. It estimates that meaningful progress towards preventing dangerous climate change would require a 25-40 percent cut below 1990 levels by 2020 for developed countries, and a 15-30 percent reduction on business-as-usual baselines for developing countries. These cuts are likely to be inadequate because, according to research by the UK's Tyndall Centre for Climate Change Research, the IPCC data on recent emissions were underestimates²², and in practice they are not being realized -- for example in the last several years the U.S. has refused to adopt emissions targets while the EU has only committed to reduce carbon by 20 percent by 2020.

This inadequate progress is further weakened by the use of offsetting. The IPCC is clear that action is needed in **both** developed and developing countries. But offsetting means that action in poor countries can be counted as part of the action needed in rich countries. Offsetting therefore

institutionalizes the idea of making cuts in one or the other location, when the science, including the IPCC, is clear that action in both is needed. Offsetting is incompatible with the IPCC's recommendations.

The U.S. General Accountability Office (GAO) states that carbon offsets are "inherently uncertain" and "involve fundamental tradeoffs and may not be a reliable long-term approach to climate change mitigation".²³

The issue of how reduction efforts are distributed is central to both U.S. domestic policy and the UNFCCC negotiations. Taking into account the historical emissions and relative wealth of developed countries – the basis of the UNFCCC's fundamental principle of "common but differentiated responsibilities and respective capabilities" – there is a strong argument that developed countries such as the U.S. should make greater emissions cuts than those modeled by the IPCC.

There is a deeply unequal distribution of responsibility for cumulative global greenhouse gas emissions between rich and poor countries. Inadequate commitments to reduce emissions from developed countries are an unjust response to that historic responsibility. Offsetting exacerbates the inequality by further diluting developed country commitments (see section 5).

CDM is supposed to be a way of making the same levels of carbon cuts more cost-effective. At best it shifts a carbon cut in a developed country to one in a developing country. But in practice it very often does not even do this.

4.2 MANY PROJECTS IN DEVELOPING COUNTRIES WOULD HAVE HAPPENED ANYWAY

Before they can be CDM-registered, offsetting project proponents have to justify that their scheme would not have happened anyway – i.e. that it is additional. Otherwise, the net effect would be an increase in global carbon emissions (as the CDM credit allows the developed country to continue polluting).

In practice there are three reasons why CDM projects cannot be proved to be additional:

i) Schemes are already part of that country's development

Some schemes are not additional because they use technology that is widely available, or they are already common practice. In China more than 200 large scale hydro dams are progressing through CDM validation.²⁴ They are all claiming that the projects would not have gone ahead without CDM revenue – for example, because a coal-fired station would have been cheaper to build. This ignores the fact that the Chinese government is a strong supporter of hydro-electric development, that hydro is a major component in its five-year plans, and that the Chinese hydro-electric industry is expected to grow from 132-154 gigawatts (GW) of capacity in 2010 to 191-240 GW in 2020 – growth equivalent to around 20 large coal-fired power stations. Hydro growth in China is continuing at previous trends, and there is no evidence that removing CDM credits would stop China from continuing its strategy of building more dams.

These hydro stations are already big revenue earners; CDM revenue is a bonus, not the deciding factor. Developers stand to gain many extra millions from applying to the CDM, as does the Chinese government, which taxes CERs.²⁵

LUCRATIVE COKE OVEN

One example of an offset project that has applied for CDM credits is a coke oven-related project in China's Shanxi province. This project would capture excess coke from Coke Jiuxin's plant to produce energy. This is a very economically attractive project (saving on electricity costs) and it is missing many of the characteristics needed to prove that it would be financially infeasible without CDM credits. The project had already attracted 70 percent of its funding from the China Development Bank before gaining CDM registration, making it difficult to demonstrate that this project would not have happened anyway -- i.e. that it is additional.²⁶

The NGO International Rivers states:

"... of 370 Chinese hydropower projects submitted for CDM validation, 77% are expected to start generating within 12 months of their validation comment period...Normally hydropower plants take at least several years to build, confirmed by the PPD [Project Design Document] that provides a construction start date. This means that most of the Chinese hydropower projects in the CDM pipeline started construction prior to beginning the CDM validation process... Since construction began well before CDM registration, it is clear that

these projects still would go ahead even if they were not successfully registered as CDM projects."²⁷

Stanford University researchers Michael Wara and David Victor state that the Chinese Government has recently introduced strong policies to support these technologies, as a way to relieve the economic and pollution impacts of relying heavily on coal as China massively increases its power-generation capacity. They also show that "essentially all" new hydro, wind and natural gas fired capacity is applying for CDM credits.

Wara and Victor argue:

"taken individually, these claims may make sense -- because individually any particular power plant utilizing non-coal sources probably faces greater hurdles than new coal-fired generation ... taken collectively however, these individual applications for credit amount to a claim that the hydro, wind and natural gas elements of the power sector in China would not be growing at all without help from the CDM. This broader implication is simply implausible in light of the state policies described above."²⁸

GANSU HYDRO PROJECT

International Rivers cites the example of the Xiaogushan, Gansu, hydro project: a 2003 Asian Development Bank report on the project said it was the cheapest option for expanding generation in Gansu, regardless of CDM revenue, and a priority for the local and provincial government. Yet in 2006, two years after construction started, the developers claimed that

without CDM support it was too risky "to reach financial closure and [...] commence the project construction". It was CDM-approved in August 2006.²⁹

Other sectors too are looking to offset opportunities to generate extra revenue, but not necessarily make previously unbankable projects viable. Indian government officials say India's rapidly expanding sugar industry should seek offset credits, as its ethanol production is displacing petrochemicals. As the industry has expanded at 35 percent a year for the past five years, this activity cannot be deemed to be additional.³⁰

The U.S. GAO says assessing additionality will become more complex "as host countries begin to factor the CDM into their planning efforts and it becomes more difficult to identify what would have happened without the program".

ii) Proof of financial viability is thin

To get CDM support, projects have to prove that without CDM revenues they would not be financially viable. The usual method for doing this is to show that the project generates a lower Internal Rate of Return (IRR) than is standard for projects in the region, and a higher IRR with the CDM revenues. But there are wide discrepancies in how different projects clear this hurdle.

For example, India's Tanjavur natural gas power plant claims that the IRR without CDM is 15.3 percent, stating that "all power projects in India are considered viable only if the guaranteed returns of 16% on the capital are ensured".³¹ This project was registered on 29 May 2007. Yet the Kalyani Steels electricity generation project registered on 29 September 2006 states: "In the Indian

power sector a 16% return on equity has been an established benchmark for a long time ... this has recently been revised downwards to 14% by the Central Electricity Regulatory Commission.”³²

If the Tanjavur project had used 14 percent it would have not needed the CDM revenues to clear the IRR benchmark. Tanjavur is not an additional project.

86 PERCENT OF CDM PROFESSIONALS AGREED THAT “IN MANY CASES, CARBON REVENUES ARE THE ICING ON THE CAKE, BUT ARE NOT DECISIVE FOR THE INVESTMENT DECISION”.

It has been widely reported that hydropower developers routinely underestimate the amount of power their dams will generate, which has the effect of reducing projected revenue streams, making such projects appear less financially attractive without CDM revenues. International Rivers argues that a typical hydropower load factor³³ is around 50 percent. But citing researcher Axel Michaelowa,³⁴ International Rivers says that as of March 1, 2008 the CDM project pipeline contained 82 hydro plants in China with a load factor below 40 percent and seven with a load factor below 30 percent.

These are not isolated examples. Analysis by Barbara Haya³⁵ suggests that three-quarters of registered CDM projects were already complete at the time of approval. Developers counter that expectation of CER revenues was critical for the decision to go ahead with the project. Such a claim is not provable in most cases. Indeed, a survey of CDM professionals found that 71 percent agreed that “many CDM projects would also be

implemented without registration under the CDM”; and found 86 percent of them agreed that “in many cases, carbon revenues are the icing on the cake, but are not decisive for the investment decision”.³⁶

An Asian Development Bank senior official said in 2008:

“When the CDM was introduced 10 years ago, there was much expectation from the developing countries that it would provide the necessary up-front financial and technical support for new sustainable development projects that would reduce greenhouse gas emissions. Today ... it is mostly functioning to provide additional cash flow to projects that are already able to move forward with its [sic] own financing.”³⁷

iii) Exaggerated claims

There are structural reasons in the design of CDM approval that mean carbon benefits are likely to be exaggerated, additionality claims abused, and sustainable development problems ignored.³⁸

Wara and Victor write:

“The host governments and investors that seek credit have a strong incentive to claim that their efforts are truly additional. The regulator – in this case, the CDM Executive Board (EB) – can’t in many cases gather enough information to evaluate these claims. These problems of asymmetrical information are compounded in the CDM, to be sure, because the CDM Executive Board is massively under-staffed and the CDM system relies on

third-party verifiers to check the claims made by project proponents. In practice, these verifiers, who are paid by the project developers, have strong incentives to approve the projects they check. Further, there is scant oversight on the integrity of the verification process and no record of punishing verifiers for misconduct. Lacking any other source of information about individual projects and facing pressure from both developing and developed country governments, the CDM Executive Board is prone to approve projects. Asymmetries of information are rampant; the incentives mostly align in favor of approval.

“This challenge is made all the more formidable by the sheer number of projects upon which the Board must decide. The CDM EB, on average, registers about one project every day as eligible to generate CDM credits. Thus the Board cannot afford to spend large amounts of time evaluating the complexities of financial data presented to justify a project’s eligibility for CDM credits nor can it delve into a project’s relationship to state energy policy. Furthermore, the CDM EB faces a financial limit on the costs it can reasonably impose on individual offset projects. In order to remain viable, relatively small carbon offset projects cannot afford the cost and uncertainty that would accompany truly extensive scrutiny. Indeed, there is strong pressure from CDM investors to limit such transaction costs and speed up approval.”³⁹

4.3 NO GUARANTEES OF EMISSIONS CUTS

CDM projects cannot guarantee carbon cuts and often exaggerate claims about the amount they will cut. This is an inherent problem. Any system of credits for reductions against a hypothetical business-as-usual scenario is inherently prone to questionable claims of certainty.

The U.S. GAO reports that:

“the use of carbon offsets in a cap-and-trade system can undermine the system’s integrity, given that it is not possible to ensure that every credit represents a real, measurable, and long-term reduction in emissions”.⁴⁰

Because offset cuts are created against a hypothetical business-as-usual baseline, it is impossible to ensure that offset credits guarantee carbon cuts. Not only are offset credits unable to guarantee genuine reductions but in some cases they can actually cause emissions to increase.

There is a growing body of data indicating that CDM projects are not delivering true emission reductions. For example, a report by Lambert Schneider of Germany’s Institute for Applied Ecology found that 40 percent of CDM projects registered by 2007 represented “unlikely or at least questionable” emission cuts. David Victor, the head of Stanford University’s Energy and Sustainable Development Program, found that “between a third and two-thirds of CDM offsets do not represent actual emission cuts.”⁴⁰

NEW COAL-FIRED POWER STATIONS

In September 2007, the CDM board ruled that super-critical coal-combustion plants could receive CERs. This is more efficient than older technology, but is still highly carbon-intensive (producing high levels of carbon per unit of electricity generated). It is not particularly new or expensive technology that requires CDM help. Even by 2004, over half of the orders for new coal plants in China were for the super-critical type.

The World Bank Group is supporting the development of the Tata Ultra Mega coal-fired power complex in Gujarat India⁴² – a mammoth 4 GW series of five power plants expected to be among the top 50 green house gas emitters in the world – stating that its approach involves “leveraging Kyoto Mechanisms (Clean Development Mechanism), to enhance the attractiveness of less GHG intensive energy generation and delivery approaches”. David Wheeler, Senior Fellow at the Center for Global Development says: “instead of supporting critical zero-emissions energy investments, scarce international resources are sweetening a private sector project that will emit over 700 million tons of CO₂ during its operating life”.⁴³

In practice, any fossil fuel project that offers even marginal improvements can claim CERs. Yet as International Rivers put it, “... technological advancement means that a power plant entering

construction today can be expected to be more efficient than one built five or ten years ago”.

TANJAVUR NATURAL GAS COMBINED CYCLE POWER PLANT, TAMIL NADU, INDIA

Registered in May 2007, this project claims to reduce carbon emissions by 180,000 tons by being cleaner than existing power plants in the region, displacing dirtier power from the grid. Although it is cleaner, it is still a new fossil-fuel power station, average by western standards. In this case the CDM is helping India to copy and lock in to a high fossil-fuel, western development path, rather than take a low-carbon path.

Developing countries need to bypass this western stage of development, not mirror it.

In addition, the plant is not displacing a dirty power plant; it is an additional plant to meet increasing electricity demand in the region. Claims that the project will result in overall lower emissions from the region are refuted in the project’s design document itself which states that a benefit of the project is that it will “make coal available for other important applications”.⁴⁴

HYDRO AND WIND PROJECTS

Other schemes exaggerate the amount of carbon saved. For example, wind and hydro projects in China routinely claim to be saving carbon because they are displacing dirty fossil fuels from the grid, comparing these projects with historical averages of carbon intensity of electricity. These new projects are not displacing fossil-fuel stations already on the grid, but are being built to meet growing electricity demand. It would be more accurate to compare the wind project with the projected carbon intensity of the region's electricity. These projections would include wind and hydro projects, as they are an agreed part of the Chinese government's strategy for electricity generation, which gives "priority to renewable power when transmitted to the state power grid". The Chinese government also says: "China will continue to promote the comprehensive cascading development of water-power-rich river valleys. It will quicken the pace of constructing large hydropower stations."⁴⁵ It is almost impossible to know what the wind project displaces. As International Rivers puts it: "If Windfarms R Us hadn't built their project, would MegacarbonCorp have sold more coal-fuelled power, or would Standard Wind have gone forward with their project instead?"⁴⁶

Two impossibilities:
Proving additionality and
proving carbon cuts

International Rivers says:

"While baseline-and-credit trading may have made sense as a theoretical

concept to the sleep-starved negotiators in Kyoto, applying it in the real world has shown it to be fatally flawed. The concept depends on being able to give accurate answers to two inherently unanswerable questions.

"To know a project is eligible, one must know whether it is being built only because the developers will be able to sell offsets (i.e. it is additional). To know how many offsets to grant to the project one must know what would have happened had the project not been built (i.e. what would the business-as-usual, or "baseline" emissions be).

"English Journalist Dan Welch gives a neat summary of the difficulty of determining the 'right' quantity of avoided emissions: 'Offsets are an imaginary commodity created by deducting what you hope happens from what you guess would have happened.'"⁴⁷

The U.S. GAO states:

"... because additionality is based on projections of what would have occurred in the absence of the CDM, which are necessarily hypothetical, it is impossible to know with certainty whether any given project is additional."⁴⁸

OFFSETS AND SUBPRIME CARBON

"Subprime carbon" – called "junk carbon" by Wall Street traders – are offset projects that fail to reduce emissions and thus collapse in value. This can pose a broader problem because offset developers often enter into forward contracts (a type of derivative) in which they promise to deliver carbon credits to a buyer, even before the offset project has been verified or credited by the CDM

Executive Board. These carbon forwards can be sold and resold (on their own or bundled with other assets) multiple times among investors in the secondary markets. And like subprime loans, which are loans that are at relatively high risk of not being paid, offset projects run the risk of defaulting, or not receiving credits.

A key type of "carbon default risk," which in fact all offset projects face, relates to additionality. As more and more financial investors have a stake in making sure their carbon credits are delivered – regardless of the environmental effectiveness of the project – the more pressure will be put on the CDM Executive Board (the sole arbiter of additionality) to give credits to offset projects which don't deserve them. For example, in late 2008 a carbon offsets trade association (which is led by Wall Street bankers such as Merrill Lynch and JPMorganChase) slammed the UN Clean Development Mechanism for "unacceptable delays" in issuing carbon credits.⁴⁹

Similarly, verifiers, which are supposed to provide independent audits on how much carbon a project actually reduced, will be under increased pressure to inflate their figures. Like credit rating agencies – which failed so spectacularly in the financial crisis -- these verifiers are paid by the asset seller (i.e. the offset developer), rather than the buyer. Moreover, in the same way that credit rating agencies both designed complex mortgage-backed securities and also rated them, some carbon consulting firms provide both project development consulting and verification services, which creates a conflict of interest.

4.4 OFFSETTING DELAYS LOCAL BENEFITS

Offsets weaken emissions reduction targets in developed countries, and this in turn eases the pressure on polluters both to invest to cut emissions and to avoid investments that are high carbon. Polluters are more willing to make high-carbon investments if they feel that they can buy cheap offsets to meet their compliance obligations.

A rapid transition to the use of clean energy technology can bring many benefits to society – the use of offsets delays this transition and often transfers these potential advantages to the location where the offsets are taking place.

i) Green Jobs

Shifting to clean energy technology can create hundreds of thousands, potentially millions, of new green jobs in the United States.

However, the use of offsets allows the price of fossil fuels to remain low and dampens the demand and deployment of renewable energy technology and slows the growth of green jobs.

Domestic jobs can be created as new wind and solar farms are built and

operated, and many times more jobs can be created in the manufacturing sector. For example, a wind turbine contains 6,000 parts – parts that could be manufactured in factories across the nation. The nation's green jobs market has dramatic growth potential, outpacing overall job growth 9.1 percent to 3.7 percent over a 10-year span.⁵⁰

An example of such job creation took place in Pennsylvania. In 2006, the Spanish wind energy company Gamesa Corp. re-opened and re-tooled closed steel mills in Pennsylvania, creating over 500 high-skilled jobs producing wind turbines.⁵¹

ii) Technological Innovation

Without offsets, polluters would have a clear incentive to invest in new and more efficient technologies. A price on carbon or other complementary regulatory standards can promote innovation across all sectors of the economy. Such innovation is essential if the U.S. is to maintain its competitive edge into the future, as commented on by President Obama: “The nation that leads the world in creating new energy sources will be the nation that leads the 21st-century global economy.”⁵²

While much of the technology used for solar and wind power was created in the U.S. forty years ago,

most technological advancement since has taken place overseas. As venture capitalist John Doerr recently pointed out in testimony before the Senate Committee on the Environment and Public Works, “If you list today's top 30 companies in solar, wind and advanced batteries, American companies hold only 6 spots. That fact should worry us all.”⁵³

Because it delays these changes, offsetting is a major barrier to action to prevent dangerous climate change. Offsetting makes it far more likely that the United States and other developed countries will continue on a high-carbon path, choosing to buy cheap permits rather than invest in low-carbon infrastructure.

This is not just a problem for developed countries. Investment in low-carbon technologies would make them cheaper and more widely available for developing countries to deploy, and enable them to avoid following the same high-carbon development path as developed countries. For example, rapid up-take of solar, tidal, wave and off-shore wind power opportunities will make it far more likely that developing countries will be able to use these technologies rather than follow the high-carbon path of hundreds of new gas- and coal-fired power stations.

Just as offsets weaken the incentives for industry to make low-carbon infrastructure investments, they also weaken the incentives for governments to take urgently needed action. Failing to invest in a low-carbon path has short- and medium-term economic costs, as well as long-term implications as older and dirtier technologies and infrastructure are locked in, sometimes for many decades.

iii) Better Health

The burning of fossil fuels from coal-fired power plants and from the exhaust of cars and trucks releases not only carbon dioxide but also many other deadly pollutants. The largest source of mercury pollution is coal-fired power plants. In the U.S. one out of every six women of childbearing age may have blood mercury concentrations high enough to cause birth defects. Each year approximately 24,000 people die from the particulate matter emitted from coal plants. Fossil fuel pollution causes over 500,000 asthma attacks each year, over 38,000 non-fatal heart attacks and racks up an annual health care bill of over \$160 billion.⁵⁴

GOVERNMENT POLICY SPURS BRIGHT(ER) IDEA

In 2007 the U.S government passed tough efficiency standards for light bulbs that will go into effect in 2012. Many assumed that the standard light bulb would go the way of the horse buggy – incandescent light bulbs had changed little since they were invented by Thomas Edison in 1879. Most experts predicted that compact fluorescent light bulbs (CFL's) or light-emitting diodes (LEDs) would be the light source of the future, given the constant improvements with these technologies. With the efficiency standard quickly approaching, however, a wave of research and innovation is rippling through the lighting industry. The big three lighting companies — General Electric, Osram Sylvania and Philips — are all working on the technology, as is Auer Lighting of Germany and Toshiba of Japan. Philips has already introduced a new incandescent bulb that is 30% more efficient and can last three times as long as the older bulbs. As this example clearly shows, the private sector can respond quickly when clear market signals are provided.⁵⁵

4.5 OFFSETTING UNDERMINES LOW-CARBON DEVELOPMENT IN DEVELOPING COUNTRIES

In practice, offsetting is not helping developing countries transform their economies to a low-carbon path. Rather, in many cases it is locking them in to a high-carbon, unsustainable path. There are four main reasons for this:

Offsetting does not help with new technology or innovation, because of its focus on cheapest options

The biggest source of CDM credits comes from applying widely available technologies to clean up greenhouse gases like Nitrous Oxide (N₂O) and hydrofluorocarbons (HFC) from chemical installations. The technology – to strip N₂O from nitric acid plants – is decades old. These are end-of-the pipe, old technologies with little other economic, social or environmental

value. This is not to say that the projects have no value: it is important to prevent these gases from being vented. But using the CDM to do so prevents emissions reductions in rich countries, does nothing to move poor country infrastructure away from a high-carbon path and distracts attention from many sustainable development projects in developing countries.

It is also an economically inefficient means of funding emissions reductions in developing countries. Wara estimates that HFC projects in the CDM as of 2006 would generate \$5.9 billion of credits for refrigerant manufacturers, but destroying the gases costs approximately \$126 million. A similar situation occurs for N₂O projects, where the price of CERs is tens of times more than the cost of introducing the technology.⁵⁶

It is likely that the CDM is also helping lock developing countries into a high-carbon path because the revenues going to corporations carrying out these HFC and N₂O and fossil-fuel efficiency projects, as well as new coal- and gas-fired power

plants – which account for well over half of the total CDM credits -- are not going to be spent on renewable or sustainable development projects. Instead, the companies which received these revenues are often in the business of building more fossil-fuel intensive industries.

Some big CDM projects are even associated with major new fossil-fuel power stations such as the Tanjavur plant (see page 16). It is claimed that these are more efficient than existing stations. Yet these projects are actually doing nothing more than ensuring that the new stations meet the standards of existing best-practice plants – and those are extremely inefficient, high-carbon intensity plants that might have been built anyway.

Similarly, hydro plants, which are a major part of the CDM portfolio, are not using radical new technology and are part of many countries' existing development plans. New technologies such as solar are expected to account for as little as 0.1 percent of total CDM credits by 2012.

Offsetting can block new laws or practices

CDM rules can lead to a regulatory chill, creating an incentive for developing countries to not implement laws to cut carbon emissions.

A project can claim to be additional only if it can show that there are no laws compelling the introduction of the new technology. Companies will lobby for developing countries to not implement such new laws, so that they can continue to claim credits. For example, CDM registration documents for N₂O destruction projects in China routinely state that “there is no regulation or incentive to eliminate N₂O emissions for nitric acid plants”. As the Chinese government collects tax revenues on the CERS earned by these projects, it has a strong incentive to not pass regulation requiring that the gas be captured and destroyed. CDM project documents expect the current status to continue, saying: “In fact, many other companies in the Host Country are currently planning or developing similar CDM project activities.”⁵⁷

Offsetting could have a particularly

undesirable impact for some types of projects. For example, a Joint Committee of the UK Parliament has said that:

“the economic incentives offered by the CDM appear actually to be encouraging the building of refrigerant plants in the developing world, simply in order that the HFC by-products from the plant can be incinerated, and the credits generated from this sold at a large profit.”⁵⁸

In addition, there are many groups lobbying for carbon offsets to be granted to projects designed to sequester carbon through minimizing tropical deforestation and forest degradation. In particular, revenues generated from carbon credits are seen as a way to fund the UN’s REDD program, a leading initiative to avoid deforestation. However, in order for REDD projects to participate in a carbon trading system, countries must first establish a baseline deforestation rate. Countries with low current levels of deforestation would have a perverse incentive to increase their level of deforestation. This would enable them to claim greater amounts of credits for reducing deforestation, thus increasing carbon emissions in the short term.

GAS FLARING IN NIGERIA

The Kwale gas project in Nigeria is supposed to capture gas that is being illegally flared, and use it to generate electricity. The company applying to the CDM has been flaring gas for years. The design document, in arguing that the project is additional because there are no laws to prohibit gas flaring, says: “Whilst the Nigerian High Court recently judged that gas flaring is illegal, it is difficult to envisage a situation where wholesale changes in practice in venting or flaring, or cessation of oil production in order to eliminate flaring will be forthcoming in the near term.”⁵⁹

In other words, there is a law, but the company apparently does not feel it should comply and will only do so if paid. Companies are even less likely to comply with this law if they feel that by disobeying it the industry will be able to obtain CDM credits.

The U.S. GAO concludes:

“The CDM does not credit emission reductions that result from newly imposed policies or standards, in part because it would be difficult to demonstrate that emission reductions were a direct result of the law. This may pose a dilemma for host countries that want to implement low-carbon policies but also want to attract investment through the CDM.”⁶⁰

“THE ECONOMIC INCENTIVES OFFERED BY THE CDM APPEAR ACTUALLY TO BE ENCOURAGING THE BUILDING OF REFRIGERANT PLANTS IN THE DEVELOPING WORLD, SIMPLY IN ORDER THAT THE HFC BY-PRODUCTS FROM THE PLANT CAN BE INCINERATED, AND THE CREDITS GENERATED FROM THIS SOLD AT A LARGE PROFIT.”

Offsetting doesn't deliver sustainable development

Many CDM projects have major negative environmental and social impacts, as documented by organizations such as International Rivers and Cornerhouse.⁶¹ This is not to say that the CDM is causing these problems: as argued earlier, many projects would have happened anyway. The CDM is not only meant to help mitigate climate change but deliver sustainable development benefits. These benefits have not materialized.

An analysis in 2007 of a sample of CDM projects found that a mere 1.6 percent of CERs were issued to projects with sustainable development benefits.⁶²

Michaelowa and Michaelowa report that

“projects addressing the poor directly are very rare and ... even small renewable energy projects in rural areas tend to benefit richer farmers and the urban population.”⁶³

The average cost of the CDM approval and monitoring process is an initial U.S.\$ 100,000-265,000, plus annual costs of U.S.\$ 15,000-25,000 in subsequent years.⁶⁴ This creates a bias towards large-scale projects, and against smaller ones that tend to work with local communities to deliver sustainable development.

The U.S. GAO reports that

“it may be possible to achieve the CDM's sustainable development goals and emissions cuts in developing countries more directly and cost-effectively through a means other than the existing mechanism.”⁶⁵

As described in the example to the right, some CDM projects will actually harm existing projects with strong sustainable development benefits, as well as fail to deliver carbon benefits themselves.

ENERGY FROM WASTE IN BALI

In Bali, Indonesia a new CDM-compliant waste-to-energy incinerator claims to avoid the release of methane from the breakdown of organic waste in landfills. Yet “most organic waste is fed to pigs; the project would take that waste from farmers to throw into landfill in order to purposefully increase methane generation. Some portion of these emissions would then be captured and burned in order to claim carbon credits.”

The project is threatening the existence of an award-winning sustainable development recycling project employing 40 local residents.⁶⁶ The coordinator of the recycling project says “the local environment agency has told me that we need to shut down our recycling operation in order to send more waste to the landfill to generate CDM credits.”⁶⁷

HYDRO PLANT, INDIA

A large hydro plant on the Bhilangana River, India, is threatening to destroy an “ingenious, extremely low carbon system of agriculture,” where local farmers run a finely-tuned terraced irrigation system to produce rice, wheat, mustard, fruit and vegetables – a “uniquely sustainable modern technology.”⁶⁸

* Further case studies at http://www.internationalrivers.org/cdm_comments/date

Risks from REDD

Proposals to allow REDD projects to generate carbon offsets pose significant risks to sustainable development. The definition of a forest under the Kyoto Protocol allows for the replacement of natural forests with plantations. If this definition were to be used in an international offsetting scheme such as the CDM, such projects could well support the conversion of natural forests to plantations, which store as little as 20 percent of the carbon that intact natural forests do.

Proposals to enable REDD projects to qualify for carbon offsets are likely to drive up the value of forest lands, which risks increasing the likelihood that these lands will be wrested away from forest-dependent communities, who are likely to be marginalized already within their countries. The commodification of forest carbon is likely to be inherently inequitable as it discriminates against women, Indigenous Peoples, and other marginalized groups who rely on free access to forest resources.

Denying local and Indigenous communities access to forest resources could have severe impacts on poverty alleviation and the achievement of the Millennium Development Goals.

Cash flows from offsetting are not effective

Proponents of offsetting argue that offset markets are a prime way to help developing countries move down a low-carbon path, and of discharging developed countries' responsibilities set out under the UNFCCC. But even if the many problems with offsetting could be ironed out, it is not an appropriate mechanism to achieve adequate and effective financial flows.

CDM revenues for developing countries from the EU are likely to be less than U.S.\$ 5 billion a year to 2020.⁶⁹ This is around a tenth of a fair EU contribution toward the global mitigation costs estimated by the UN.⁷⁰

Proponents of offsetting argue that the CDM and other offsetting mechanisms need to expand massively to achieve larger financial transfers. But the root problems with offsets – proving additionality and proving verifiable emission reductions – are not capable of reform. Expansion would worsen the impact of offsetting on climate change. Mechanisms of a completely different nature and scale are needed to facilitate a low-carbon development path for poor countries.

5 OFFSETTING AND INJUSTICE

The quantity of emissions cuts by developed countries as a whole have major implications for development and equity for developing countries, as analysis by the Third World Network (TWN) has highlighted.⁷¹

In particular, developing countries could be indirectly committing themselves to an unfair share of the climate burden if industrialized countries refuse to make deep emission reductions and continue to rely on international offsets to meet their emission reduction targets.

Table 5 below is an indication of what per capita emissions scenarios might look like in 2050, based on publicly declared emissions targets, current rates of offsetting, and UN projections of population growth to 2050. The table demonstrates the implications for poor countries' per

capita emissions, with and without offsetting, if rich countries agree to an 80 percent reduction below 1990 levels by 2050 under an overall global goal of 50 percent by 2050.

Even under the scenario without any offsetting, 80 percent emissions reductions in developed countries are not sufficient to ensure a leveling of per capita emissions in 2050.

Inadequate ambition from developed countries, combined with offsetting, means that inequality steeply worsens. Whereas the current per capita carbon consumption in developed countries is at least three times that of developing country per capita emissions, the offsetting scenario presented here would increase this inequality to a factor of more than eight. Such scenarios are morally unjustifiable, conflict with

agreements under the UNFCCC, and would probably undermine other international treaties including the UN Declaration on the Right to Development.

The scenarios in this section have been concerned with equity issues of current and projected per capita emissions only. However, data on cumulative emissions from 1850 show that developed countries bear an even greater responsibility. Some 76 percent of emissions from 1850 to 2002 came from developed countries; in 2002 developed countries had less than 20 percent of the global population.⁷³

This analysis is not intended to paint an impossibly bleak picture or to blame everything on developed countries. It is intended to demonstrate that the current negotiating positions of

Table 5: Total and per capita emissions implications under a global target of 50 percent reductions below 1990 levels by 2050

Scenario	Total greenhouse gas emissions (billion tons)	Developed countries' emissions (billion tons)	Developing countries' emissions (billion tons)	Developed countries' per capita emissions (tons)	Developing countries' per capita emissions (tons)
1990 reference base year	38.6	18.2	20.4	15.3	5.0
2050 – Developed countries meeting 80 percent target, no offsetting	19.3	3.6	15.7	3.0	2.0
2050 - Developed countries meeting 80 percent target, using offsets for half of this total reduction	19.3	10.9	8.4	9.2	1.1

the United States and other developed countries are inadequate and unfair, and need to change urgently. Even an 80 percent by 2050 target for rich countries as part of a 50 percent global cut is not a fair distribution for poor countries, given historic contributions. Offsetting would deepen the injustice, as it is fundamentally a financial mechanism to allow rich countries to transfer the responsibility to reduce emissions to developing countries.

Inequitable and unjust outcomes can be avoided only if the United States and other developed countries take on much greater cuts than currently being considered, and ensure these are achieved entirely domestically without any recourse to offsetting.

Just as crucially, the U.S. and other

developed countries must commit to additional finance and technology to enable energy efficiency and appropriate renewable technologies for clean sustainable development in poor countries.

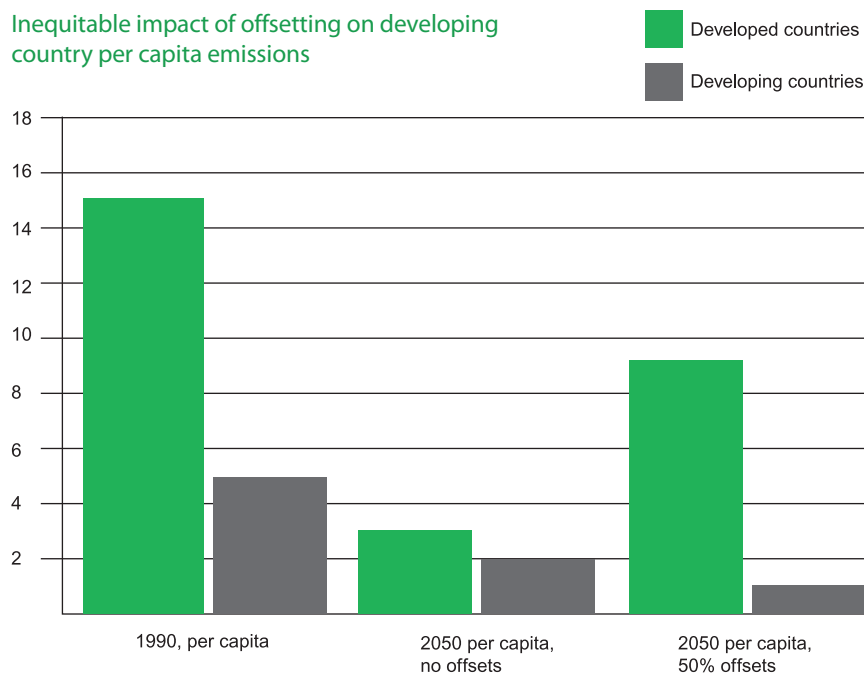
Finally, the climate impacts in poor countries must be fully compensated by rich countries through adequate adaptation funding.

A fair global transition to a low-carbon future must be achieved through cooperation between developed and developing countries acting in good faith. The relentless finger-pointing by the U.S. and other rich countries at total emissions from populous poor countries cannot mask the injustice of how the U.S. has used up more than its fair share of the world's climate budget, and how

poor countries are now being asked to shoulder a disproportionately large burden.

Without assurance from the U.S. and other rich countries that they will substantially raise their emissions reductions commitments, do so domestically, and ensure a radical shift in global financing toward the global good, it is highly unlikely that effective collective action will be achieved.

Inequitable impact of offsetting on developing country per capita emissions



6 RECOMMENDATIONS

The United States should:

1. Commit to reducing its own emissions by at least 40 percent below 1990 levels by 2020, without offsetting.
2. Reject proposals for new and expanded offsetting schemes, and work to scrap existing offsetting programs like the CDM.
3. Reject plans to introduce forest offsets, and instead negotiate effective and fair mechanisms to protect the Earth's forests that do not involve offsetting.
4. Negotiate a new financial mechanism under the authority of the UN Framework Convention on Climate Change to ensure adequate financial flows to developing countries to support their transition to a low-carbon future.
5. Provide just compensation to developing countries for adaptation to the unavoidable impacts of climate change.
6. Not count financial flows from offsetting against public financial obligations to poor countries for mitigation and adaptation.

REJECT PLANS TO INTRODUCE FOREST OFFSETS

Forest offsetting is subject to all of the problems of the CDM, but with some important additions:

- Carbon reductions are even less guaranteed — forests could become a net source of carbon instead of a sink as the planet warms up.⁷³
- Protecting forests is a complex socio-economic issue requiring policies that respect the land rights of Indigenous Peoples and forest communities.
- The complex pressures on forests (demand for forest products, illegal logging, displacement of people from other lands) demand complex governance arrangements not suitable to forest carbon trading.

Any mechanism intended to stop deforestation must be designed to fully address these issues for it to be effective and just. Further reading is available at the Friends of the Earth International website.⁷⁴

For these reasons, proposals to link forest project financing to the offset market should be rejected outright.

6.1 FINANCIAL TRANSFERS TO DEVELOPING COUNTRIES

The Stern Review estimated that mitigation to stabilize the atmosphere at even 500 ppmv CO₂e (itself an extremely dangerous level) would cost around 2 percent of global GDP annually – more than \$1 trillion; and that adaptation costs are likely to rise to hundreds of billions of dollars a year (depending on the scale of climate change).

The African Group of Nations in the UN climate negotiations argue that developing nations will need at least \$200 billion a year for mitigation.⁷⁵ The United Nations Development Program estimates the adaptation need to be \$86 billion a year by 2015. The size of revenues needed is very large.

Research undertaken by the UK's New Economics Foundation⁷⁶ summarizes the rationale and need for developed countries to fund the bulk of these costs:

“Unlike their developed country counterparts, who grew their economies generating energy at low cost and without particular environmental consideration, the responsible trajectory now asked of developing countries will require significantly greater investment. As with adaptation, there is therefore a degree of moral obligation for developed countries to finance this process. As well, there is practical necessity. Developing countries simply do not have the capacity to address poverty and human development while simultaneously adapting to and mitigating climate change.”

Not only is adequate financing a matter of moral and practical necessity, the U.S. and other developed countries have unfulfilled binding commitments under the UNFCCC relating to financing and technology transfer.

Although significant differences remain between developed and developing countries on the form and scale such a financial mechanism should take, it is widely accepted that current international financing mechanisms are simply not working (as stated by the Chair of the UNFCCC working group on finance in plenary, Poznan December 2008).

The money developed countries pay to developing countries to buy their way out of making emissions reductions is not appropriate nor sufficient to address the root causes of and solutions to climate change. New mechanisms to transfer money to developing countries must be established under the authority of and wholly accountable to the UNFCCC. A vastly significant increase in developed country public sector funding is necessary to achieve the shared goal of avoiding dangerous climate change.

Disbursement of climate adaptation and mitigation monies can only effectively be done under the governance of the UNFCCC. To most developing countries, it is simply not acceptable to distribute climate funds through existing channels such as the World Bank, which have been and continue to be dominated by developed country governments. Further, the well-documented negative social and environmental impacts of their policies have effectively discredited them from holding any competent governance or regulatory role in international climate finance.

There are various financing proposals currently under consideration in the UNFCCC. It is likely no one single proposal will be sufficient, but rather a package of sources will be required.

Exactly what mix of sources countries agree to, what governance arrangements are in place, and what types of activities will be funded, will be a matter for critical negotiations leading up to the Copenhagen UN climate talks.

UNFCCC climate funds should be managed according to the following basic principles:⁷⁷

- Substantial, obligatory and automatic funding from diverse sources. Finance must be contributed on agreed responsibility indicators according to historical and current per capita emissions that meet the needs identified for mitigation and adaptation in developing countries.
- Representative governance that is equitable, democratic, transparent, and accountable to all, with civil society formally represented in all governance structures.
- Participatory planning that ensures the full participation of climate impacted peoples in developing actions and policies for adaptation and the shift to low-carbon economies.
- Capacity building for the development, application, transfer and dispersal of sustainable and equitable technologies, practices and processes and development of local expertise.
- Direct access for the most vulnerable so that social movements, NGOs and community-based groups have direct access to funds (in addition to government agencies).

- Protecting rights of all people, particularly recognizing and respecting the rights of Indigenous Peoples and local communities, to determine their own development path, decision-making processes, and activities related to climate change. Key global agreements such as the UN Universal Declaration of Human Rights and the UN Declaration on the Rights of Indigenous Peoples must be upheld.
- Robust monitoring and evaluation by community stakeholders and relevant experts to ensure the effective use of funding and to track program performance.

Finally, in addition to providing new international climate funding, developed countries must dramatically alter existing patterns of international financing, which are barriers to global clean, sustainable development.

- Stop carbon-intensive financing: Both public and private financial institutions channel significant amounts of investment into high-carbon infrastructure via multilateral bodies and export credit agencies such as the World Bank and the Export-Import Bank of the United States. The World Bank alone financed 26 Gigatons of CO₂ emissions. From 2006 to 2008, coal lending at the World Bank Group increased 648 percent. In 2008 fossil fuel funding increased by 102 percent.⁷⁸
- Cancel debt. At least \$400 billion of debt cancellation is immediately needed to enable developing countries to meet the United Nations Millennium Development Goals.⁷⁹ Developing countries pay more than \$30 billion a year in debt-interest payments.⁸⁰

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