

**SUSTAINABLE DEVELOPMENT SOUTH AND NORTH:  
CLIMATE CHANGE POLICY COHERENCE IN  
GLOBAL TRADE AND FINANCIAL FLOWS**

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*Summary: This paper has been prepared by the Sustainable Energy & Economy Network, a project of the Institute for Policy Studies in Washington, DC, to identify ways of encouraging support for low-carbon, anti-poverty projects in developing countries, and discouraging international financial institutions (IFIs) and export credit agencies (ECAs) from investing in carbon-intensive infrastructure. Given the slow progress of IFI and ECA reform, the paper examines a number of measures that can be introduced independent of IFI and ECA reform.*

## **Introduction**

The largest current and historical contributors to greenhouse gas emissions are industrialized countries – most of whose emissions are still rising. In order to prevent dangerous climate change, scientific opinion suggest we must not exceed an increase of 2 degrees warming above pre-industrial global mean surface temperature within the next century. In order to achieve this target, industrialized countries must cut their greenhouse gas emissions by 80% from 1990 levels by 2050.<sup>1</sup> To achieve this objective, global emissions need to peak in the next 20 years. This, in turn, requires that developing countries begin the shift toward clean energy.

Due to their relative wealth and historic responsibility for climate change, industrialized countries agreed in 1992 to take the lead in cutting emissions and pay for the clean energy transition of developing countries.<sup>2</sup> Part of this responsibility will come in the form of concessional financing provided by the North to the South, in order to reorient investments from the business-as-usual path. This type of financing is provided through Overseas Development Assistance (ODA) including that supplied by international financial institutions (IFIs) like the World Bank and regional development banks. Other forms of public finance also comes into play in determining what development path the global South takes: National export credits agencies (ECAs) are increasingly providing more public financial investment in the global South and East, in the aggregate, than the multilateral development banks, although these agencies do not, in general, have a development mandate.

However, rather than provide the sort of critical transitional financing for clean energy development in the South and East, and contrary to several objectives set out in international environmental treaties and associated agreements, these ECAs are providing subsidies in support of fossil fuel extraction, fossil fuel-based energy, and energy-intensive industry. In many cases, the primary beneficiary of these subsidies is the North; most of these projects and products are export-oriented, the exports destined for Northern markets.

According the World Resources Institute, fossil-fueled power generation and oil and gas development accounted for 40 per cent of trade and project finance flows to developing countries between 1994 and early 1999. ECAs supported \$103 billion of exports and investment in these sectors as well as in large transport infrastructure, sales of aircraft and energy-intensive manufacturing in developing countries.<sup>3</sup> The two U.S. export credit agencies, Overseas Private Investment Corporation and U.S. Export-Import Bank, provided \$32 billion to fossil fuel-related projects from 1992 to 2002. These projects, over their lifetimes, will release over 32 billion tons of carbon dioxide—far more than the amount of carbon dioxide produced from consumption or flaring of fossil fuels in 2000 by all of the world's countries (23.6 billion tons)<sup>4</sup>. Meanwhile, the World Bank Group provided over \$24 billion in financing for fossil fuel power and production between 1992 and the end of 2002.<sup>5</sup> These projects will, over their lifetimes, release more than twice all global greenhouse gas emissions for one year.

Apart from the obvious contribution to rising greenhouse gas emissions, there are three ways in which IFI and ECA financing could be subverting the objective of the UN Framework Convention on Climate Change:

1. **Dirty Development:** IFI/ECA investments in carbon-intensive sectors may involve energy-intensive industries migrating from the North to the South, resulting in carbon leakage from emissions controls under the Kyoto Protocol's Annex I to non-Annex I countries, i.e. developing countries and the poorer economies in transition; this, in turn, may mean increased emissions globally than what would have otherwise occurred, if production is less carbon-efficient in the new location, or if the financing provides incentives for fossil fuel-driven development that might not otherwise have taken place.
2. **Subsidizing Energy Profligacy:** IFI/ECA support for fossil fuel production and transportation to Northern markets may be slowing progress on climate change by subsidizing the energy profligacy of industrialized countries, particularly the United States which, due to President George W. Bush's withdrawal from the Kyoto Protocol, has no greenhouse gas emissions limit.
3. **No Clean Energy Leapfrogging:** Opportunities for technological leap-frogging are being lost and IFI/ECA investments are promoting fossil fuel technological lock-in in the global South.

The multi-stakeholder report of the G-8 Renewable Energy Task Force, which was initiated at the request of the G-8 Okinawa Summit, set out a number of recommendations for IFIs and ECAs to align themselves with clean energy objectives.<sup>6</sup> The recommendations for IFIs included the need for power sector restructuring to support renewables, increased funding for renewables projects, the development of innovative financing mechanisms and strengthening micro-finance. Recommendations for ECAs included the introduction of energy efficiency and carbon intensity standards, as well as proper reporting methodologies and environmental impact assessment procedures. One of the overarching findings of the report was that the playing field between fossil fuels and renewable energy was not level and that fossil fuel subsidies must be reduced while support for renewable energy is increased.

However, when the report's recommendations were presented to the G-8 for adoption, some G-8 governments refused to support it. As a result, the IFI/ECA recommendations have yet to be adopted. In the absence of significant IFI and ECA initiatives to support climate objectives, this report looks at ways in which climate friendly investment can be encouraged while dirty investment is discouraged.

## I. ENCOURAGING THE RIGHT PROJECTS

*This section identifies current multilateral policy commitments from the UNFCCC negotiations, particularly the 2001 Marrakech Accords, and the 2002 World Summit for Sustainable Development that have been made in relation to international energy policy and clean technology transfer. In order to ensure that these commitments are fulfilled, it examines how policy coherence can be improved and how these commitments, many of which relate to international trade, can be protected from challenges at the World Trade Organisation (WTO).*

### A. Which commitments are yet to be fulfilled?

#### 1. WSSD Plan of Implementation

##### *Poverty eradication*

The Plan of Implementation of the 2002 World Summit for Sustainable Development (WSSD) included several paragraphs on the subject of energy. First, WSSD put the provision of energy services firmly in the context of poverty eradication and the achievement of the Millennium Development Goals.<sup>7</sup> In its first substantive section, ‘*Poverty eradication*,’ WSSD prioritized the promotion of “enhanced rural electrification and decentralized energy systems, increased use of renewables, cleaner liquid and gaseous fuels and enhanced energy efficiency”. The paragraph called for “accelerated” financial and technical assistance in achieving this, “bearing in mind that in developing countries sharp increases in energy services are required to improve the standards of living of their populations.”

##### *Promoting sustainability*

WSSD failed to result in an agreement on a global renewable energy target due to obstruction by the United States and OPEC countries.<sup>8</sup> Instead, the relevant section of the Plan of Implementation, under the heading ‘*Changing unsustainable patterns of consumption and production*,’ where the target would have been inserted, ended up reading as follows:

*“Diversify energy supply by developing advanced, cleaner, more efficient, affordable and cost-effective energy technologies, including fossil fuel technologies and renewable energy technologies, hydro included, and their transfer to developing countries on concessional terms as mutually agreed.*

*With a sense of urgency, substantially increase the global share of renewable energy sources with the objective of increasing its contribution to total energy supply [emphasis added], recognizing the role of national and voluntary regional targets as well as initiatives, where they exist, and ensuring that energy policies are supportive to developing countries’ efforts to eradicate poverty, and regularly evaluate available data to review progress to this end”*<sup>9</sup>

This sub-paragraph includes several elements:

- The provision of concessional financing and the transfer of cleaner, more efficient, affordable and cost-effective fossil fuel technologies;

- Concessional financing and transfer of renewable energy technologies including hydropower;
- Substantially increasing the contribution of renewable energy sources to global energy supply;
- Ensuring that energy policies support developing countries' efforts to eradicate poverty; and
- Monitoring progress.

Other sub-paragraphs in this section, of relevance to this paper, include:

- Improving functioning of energy markets in support of sustainable development by restructuring taxation and removing harmful subsidies;<sup>10</sup>
- Recommending that “international financial institutions and other agencies’ policies support developing countries, as well as countries with economies in transition, in their own efforts to establish policy and regulatory frameworks which create a level playing field between the following: renewable energy, energy efficiency, advanced energy technologies including advanced and cleaner fossil fuel technologies, and centralized, distributed and decentralized energy systems”;<sup>11</sup>
- Strengthening “as appropriate, regional cooperation arrangements for promoting cross-border energy trade, including the interconnection of electricity grids and oil and natural gas pipelines.”<sup>12</sup>

It is clear that the purpose of the WSSD texts was to focus multilateral efforts on deploying energy services as a means to eradicate poverty and in a manner that changes unsustainable patterns of consumption and production. However, the chapeau for these sub-paragraphs clearly states, “in view of the different contributions to global environmental degradation, States have common but differentiated responsibilities.” This means that industrialized countries, which are responsible for more environmental degradation than developing countries, have a greater responsibility (moral and financial) in addressing unsustainable consumption and production patterns.

## ***2. International climate change negotiations***

The 1992 Framework Convention on Climate Change does not make a specific reference to subsidies. However, in order to fulfil the ultimate objective of the Convention, global emissions must peak within the next 20 years. Given that the life span of most energy infrastructure exceeds 25 years, this means that developing countries must accelerate the process of de-linking emissions from economic growth starting now if all of us are to escape the most dire effects of climate change. Some developing countries have already made significant progress in improving energy efficiency but much of the investment in developing countries remains fossil fuel-intensive.<sup>13</sup>

### ***Kyoto Protocol and subsidies***

The Kyoto Protocol makes a direct reference to subsidies, requiring that governments seek “progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all greenhouse gas emitting sectors that run counter to the objective of the Convention and application of market instruments”.<sup>14</sup> No specific timetable for fulfilling this commitment has been developed by the Conference of the Parties, but the incentives and subsidies governed by this requirement should include incentives and subsidies like those provided by IFIs and ECAs.

### *Technology transfer*

The UNFCCC requires that governments “promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors”.<sup>15</sup> It also states “Parties included in Annex II... shall also provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures”.<sup>16</sup> Annex II to the UNFCCC lists donor countries for the purposes of the climate negotiations and differs from Annex I in that it includes industrialized countries but not economies in transition.

This is supported by a further requirement that “...Parties included in Annex II shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties...In this process, the developed country Parties shall support the development and enhancement of endogenous capacities and technologies of developing country Parties. Other Parties and organizations in a position to do so may also assist in facilitating the transfer of such technologies.”<sup>17</sup> This article therefore contains three elements:

1. Rich countries should promote access to or the transfer of clean technologies;
2. Rich countries should help develop the endogenous technological capacity of developing countries, presumably including renewable energy manufacturing in developing countries; and
3. Other institutions, presumably including international financial institutions, should also work toward these ends.

In order to transfer technologies, governments must accelerate the deployment of technologies and associated know-how, rather than relying on business-as-usual trends. Technologies can disseminate globally by ‘spilling over’ national and project boundaries, but this process is currently too slow to prevent dangerous climate change. In order for the world to rely on technology spill-over in preventing climate change, the costs of renewable energy and other mitigation technologies would have to be brought down much faster than is currently the case, suggesting that much more aggressive emissions controls would have to be implemented in industrialized countries than is envisaged under Kyoto’s first commitment period.

The Marrakech Accords, agreed to at COP-7 in late 2001, require that governments create an ‘enabling environment’ for the transfer of environmentally sound technologies. This includes implementing “fair trade policies” and removing “technical, legal and administrative barriers to technology transfer,” “strengthening environmental regulatory frameworks..., utilizing tax preferences, protecting intellectual property rights and improving access to publicly funded technologies.” The Accords also provide for “regulations,” “preferential government procurement and transparent and efficient approval procedures for technology transfer projects.”<sup>18</sup>

IFI policies and programs will be affected by implementation of the Marrakech Accords. For instance, energy sector restructuring programs implemented by multilateral development banks would presumably have to contribute to the ‘enabling environment’ set out above. This would suggest that the World Bank, for example, should promote the strengthening of environmental regulations in developing countries and the removal of barriers to the deployment of clean technology. Marrakech also commits industrialized countries to provide “export credit programs... to promote the transfer of environmentally

sound technologies”. A study by the Institute for Policy Studies and the World Wide Fund for Nature suggests that significant reform of ECAs will be necessary to achieve this end.<sup>19</sup> Of all the methods for diffusing technology, exports and foreign direct investment are the least likely to result in technology transfer, while joint manufacturing ventures are the most supportive of technology transfer.<sup>20</sup>

### *Economic diversification*

The UNFCCC requires that governments take into account the possible adverse effects of their climate policies on other countries, particularly developing countries and countries that are “highly dependent on income generated from the production, processing and export, and/or consumption of fossil fuels and associated energy-intensive products and/or the use of fossil fuels for which such Parties have serious difficulties in switching to alternatives”.<sup>21</sup> This is reinforced in the Kyoto Protocol, which calls upon governments to consider at the first Meeting of the Parties (MOP-1), i.e. the first UN climate conference after entry into force of the Protocol, what actions will be necessary to minimize these effects.<sup>22</sup>

The Marrakech Accords include a number of requirements under this heading. Donor governments are required to provide information “on their existing and planned support programs to meet the specific needs and concerns of developing country Parties arising from the impact of the implementation of response measures”. All governments are supposed to create “favorable conditions for investment in sectors where such investment can contribute to economic diversification”. Governments are supposed to look into technological options that reduce the impacts of response measures “consistent with national priorities and indigenous resources” and to “cooperate in the development, diffusion and transfer of less greenhouse gas-emitting advanced fossil-fuel technologies.” Donor countries should “promote investment in indigenous, less greenhouse gas-emitting, environmentally sound, energy sources” in developing countries, and “provide support for research into, and the development and use of, renewable energy, including solar and wind energy, in developing country Parties.”<sup>23</sup>

The Marrakech Accords also contain a draft decision that will be taken forward to MOP-1 that requires donor countries to give priority to the following measures:<sup>24</sup>

- “The progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all greenhouse gas emitting sectors, taking into account the need for energy price reforms to reflect market prices and externalities, in pursuit of the objective of the Convention”;
- “Removing subsidies associated with the use of environmentally unsound and unsafe technologies”;
- Cooperating on the development of non-energy use of fossil fuels, increased fossil fuel efficiency and carbon storage;
- “Assisting developing country Parties which are highly dependent on the export and consumption of fossil fuels in diversifying their economies.”

Governments also agreed that the implementation of these measures should form part of the reporting requirements under Kyoto and should be funded through the Special Climate Change Fund, which is not yet operational but the guidance for which will be completed at COP-9.

### *The Clean Development Mechanism*

The Clean Development Mechanism (CDM) was designed to support sustainable development and provide a cost-effective way for industrialized countries to meet their targets. CDM works by enabling governments and companies to fund emissions reduction projects in developing countries and count the emissions reductions against their Kyoto Protocol targets. A CDM emissions reduction is determined either by reducing emissions that are already occurring, for instance through an energy efficiency measure applied to an existing factory, or by calculating a hypothetical business-as-usual emissions trajectory and subtracting the emissions hypothetically avoided due to the CDM, i.e. an improvement in project design like building a gas-fired power plant instead of a coal-fired one.

Theoretically, CDM status should only be awarded to ‘additional’ projects, i.e. projects that would not have happened without the added revenue supplied by the sale of carbon credits, which are called Certified Emissions Reductions (CERs). However, the concept of ‘additionality’ has yet to be adequately defined and the CDM Executive Board, which is responsible for determining project eligibility, has yet to establish an additionality test. As a result, most of the projects that are being proposed are non-additional, so they would have happened anyway, and due to the absence of international sustainability criteria, they are mainly large hydroelectric and plantation projects.<sup>25</sup>

Under a best-case scenario, the CDM could only ever keep emissions constant. This is because an Annex I emissions reduction does not occur unless an equal amount of emissions in a developing country is avoided. If all CDM projects were additional renewable energy and energy efficiency projects, overall emissions might decline. However, given the vested interest that Annex I governments have to keep the price of carbon as low as possible, and therefore make achieving their Kyoto commitments as cheap as possible, the likelihood is that CDM will allow for an increase in emissions along more or less business-as-usual lines.

The CDM was expected to provide a mechanism for technology transfer but, in the absence of strong project criteria devised by the CDM Executive Board, Annex I Parties or developing countries, and due to the fact that most CDM projects will be standard FDI or project ventures, technology transfer benefits will be small at best.

### **B. Improving international policy coherence**

In order for committed emissions reductions to have an impact on changing the global emissions trajectory, the international community should ensure that greenhouse gas emitting sectors do not relocate in order to avoid regulation, either by relocating partially or entirely to countries that are non-Parties to the Kyoto Protocol or developing countries. As defined by the IPCC, “The sensitivity of industry location to the stringency of environmental regulation is called ‘ecological dumping’.”<sup>26</sup> The IPCC goes on to say that, “If, and to what extent, international differences in environmental regulation have trade or even relocation implications obviously depends on a host of factors. These include country size, availability of alternatives, relative resource endowment, mobility of production factors, competition level, scope for innovation, possibility of border-tax adjustment, chances of retaliation, and redistribution of environmental tax revenues.” Clearly, IFI investments relate to developing countries and economies in transition only, but relocation to non-Party country, like the US and Australia, is also possible.

As described by the IPCC, “When developing domestic policies to meet their emissions limitation commitments under the Kyoto Protocol, some Annex I Parties may wish, or be under pressure, to impose less stringent obligations on some industries to improve their competitiveness... International co-ordination of environmental policies may be needed to reach an economically efficient outcome in which it is impossible to make one country better off without making at least one other country worse off.” Thus,

in order both to ensure that carbon leakage does not occur and to avoid competitive pressures on environmental regulation, countries should be seeking to coordinate their climate policies. This means that developing countries should be encouraged to adopt climate-friendly policies, provided that the full incremental costs of such policies are funded by rich nations, in accordance with Article 2.3 of the UNFCCC.

*Table 2.1 sets out WSSD and UNFCCC commitments discussed in the previous section. The implementation of these commitments should be coordinated and systematic to avoid ecological dumping; to support this objective, reporting requirements should be reinforced. Projects and policy measures that contribute to multiple objectives could be prioritized.*

**Table 2.1 Energy policy commitments of developed countries in relation to developing countries**

Overarching objectives	Instruments identified to achieve overarching policy objectives		
	Renewable energy and energy efficiency	Fossil fuels	Other energy policies
<b>Poverty eradication (WSSD)</b>	Accelerate financial and technical assistance	Accelerate financial and technical assistance for cleaner liquid and gaseous fuels	Accelerate financial and technical assistance for decentralized energy systems and rural electrification
<b>Changing consumption and production patterns (WSSD)</b>	Increase contribution of RE to total energy supply (through targets and other incentives) Develop technology. Transfer technology on concessional terms. Create a level playing field.	Development of cleaner, more efficient, affordable and cost-effective fossil fuels. Transfer on concessional terms cleaner, more efficient, affordable and cost-effective fossil fuels.	Restructure taxation and remove harmful subsidies. Strengthen energy trade.
<b>Preventing dangerous climate change (FCCC/KP)</b>	Transfer technology. Transfer of know-how. Support for the development of endogenous capacity and technology. Implement fair trade policies. Remove technical, legal and administrative barriers. Strengthen environmental regulatory frameworks. Utilize tax preferences. Protect intellectual property rights. Improve access to publicly funded technologies. Apply preferential government procurement. Introduce transparent and efficient approval procedures for technology transfer projects. Implement export credit programs with targets and timetables for RE.	Progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all greenhouse gas emitting sectors.	Progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all greenhouse gas emitting sectors.
<b>Economic diversification (FCCC/KP)</b>	Develop developing countries' indigenous energy sources.	Transfer and develop less-greenhouse gas emitting advanced fossil fuels technologies. Develop non-energy uses of fossil fuels, increased fossil fuel efficiency and carbon storage.	Promote economic diversification
<b>G8 – overarching objective</b>		IFIs and ECAs should take full account of climate change.	Carbon intensity standards for IFIs/ECAs

### **C. Creating specific trade obligations**

Domestic climate measures are already coming under scrutiny in the WTO. In a recent submission, Saudi Arabia argued that climate policies such as fuel taxes and renewable energy subsidies that have been introduced by industrialized countries, and therefore have a negative impact on Saudi oil exports, should be discussed in the context of WTO market access negotiations for non-agricultural goods.<sup>27</sup> While this type of reasoning is unlikely to gain favor outside OPEC, trade measures could easily become controversial.

The Kyoto Protocol establishes that governments should seek to minimize the adverse effects of their policies on international trade, while the UNFCCC requires that climate measures should not constitute disguised trade barriers.<sup>28</sup> Nevertheless, many of the Marrakech commitments could already be deemed contrary to trade rules. For instance, the Marrakech text calls for the introduction of tax and government procurement preferences that support clean technology transfer. This provision would presumably include tax and procurement preferences relating to less carbon-intensive process and production methods given that technology transfer as set out in the Convention relates to “practices and processes” as well as technologies. However, differentiating between process and production methods is normally seen to be in contravention of WTO rules.

The outcome of the current negotiations in the WTO’s Committee on Trade and Environment (CTE) in relation to the relationship between Multilateral Environmental Agreements (MEAs) and trade rules will determine how the Marrakech texts are implemented. If the CTE rules that decisions taken by conferences of the Parties to implement MEAs have a lesser standing than measures required in the MEA itself, i.e. that they do not constitute ‘specific trade obligations’ as proposed by a number of WTO members,<sup>29</sup> then the technology transfer provisions of the Marrakech Accords could become unenforceable.

In order for the WSSD and FCCC commitments outlined in this report to remain unchallenged, they will need to be deemed specific trade obligations. In the case of the FCCC and the Kyoto Protocol, this may mean amending the treaty text itself, for instance, as part of the Compliance Agreement, or by negotiating a specific COP decision on trade-related measures that establishes them as specific trade obligations.

## II. DISCOURAGING THE WRONG PROJECTS

Behind the statistics showing that billions of dollars of public funds are invested annually in projects that contribute to climate change, an alarming array of local impacts can also be identified. Carbon-intensity can often be used as a proxy for local environmental destruction. In a report by the Institute for Policy Studies examining World Bank financing in Orissa, India, the local impacts of aluminum smelters are described: “Fluoride, a by-product of aluminum smelting, which consumes 30 percent of the power produced in the region, has contaminated the groundwater around aluminum smelters. As a result, there is a crippling outbreak of fluorosis - a disease which causes skin disease, and bones and teeth to grow brittle - among people and cattle living near the smelter and captive power plant of NALCO (a French-owned aluminum plant), where the state pollution control board tested water wells and ponds and found fluoride well in excess of the regulatory limit. In 1990, scientists from G.M.College of Sambalpur found an astonishing 67% of men and 64% of women suffered from fluorosis; most severely impacted were young people between the ages of 12 and 19. Cattle populations have dropped precipitously in the area due to the bone-weakening disease.”<sup>30</sup>

These aluminum smelters do not produce goods for domestic consumption and do not contribute to poverty eradication; instead, they are subsidized, mostly Northern-owned industries escaping the more stringent pollution controls of industrialized countries.

In supporting fossil fuel production and transportation, IFIs and ECAs are using public funds to subsidize cheap fossil fuels for rich economies, instead of supporting clean energy and poverty eradication in developing countries. According to a joint NGO report on the planned Baku-Tbilisi-Ceyhan (BTC) oil pipeline, its financing will ensure that, “Caspian oil is burnt in the car and truck engines and power plants of Western Europe, the USA and the Far East...Once burnt, the oil transported daily along the BTC pipeline at a rate of one million barrels daily (when it is operating at full capacity after 2008) would contribute 160 million tons of CO<sub>2</sub> to the atmosphere every year. This is equivalent to nearly 30% of the UK’s CO<sub>2</sub> emissions for 2000 (557 million tons).” The report goes on: “It is expected that US carbon dioxide emissions will be 30 per cent above 1990 levels by 2012, instead of seven per cent below as agreed in Kyoto. US per capita emissions are twice those of the EU, pointing to an even more wasteful, fossil fuel-dependent lifestyle. If European public money is used to support a pipeline whose output is sold at least in part to the US, European taxpayers will be supporting the energy profligacy of the US while it remains outside the Kyoto Protocol.” Again, this project will lead to local impacts ranging from human rights abuses in Kurdistan, to the possible destruction of the Borjomi water basin in Georgia.<sup>31</sup>

This section looks at three ways of discouraging these types of IFI/ECA projects by seeking to internalize the carbon costs of export-oriented investments:

- Introduction of a project-level ‘dirty development mechanism’;
- Adjusting emissions budgets to reflect the embedded carbon associated with imports;
- Border-tax adjustments.

## **A. Project-level Dirty Investment Mechanism**

Kyoto's Clean Development Mechanism was designed to make emissions reductions economically viable in developing countries, i.e. where no carbon constraints exist, by creating carbon credits for sale in industrialized countries where carbon emissions are finite. In theory, projects that qualify under the CDM must:

- Be additional, i.e. they would not have happened otherwise;
- Result in an emissions reduction as compared with a real or hypothetical business as usual baseline;
- Contribute to sustainable development as defined by the host country.

However, there is no parallel mechanism in place to discourage dirty investment in developing countries, i.e. investment that results in emissions increases and undermines sustainable development. This creates a system of carrots and no sticks and, depending on how vaguely CDM rules are interpreted and applied, CDM could merely provide yet another subsidy for dirty industry.

Under the Clean Development Mechanism, the share of revenue resulting from the projected sale of Certified Emissions Reductions is the subject of negotiation between project sponsors. In the case of a "Dirty Investment Mechanism," the share of Certified Emissions Increases would also have to be negotiated between project sponsors. The easiest way to ensure that corporations are not exploiting the lack of carbon constraints in developing countries would be to introduce legislation in Annex I countries requiring that Dirty Investment project sponsors buy emissions credits under their respective domestic emissions trading systems to offset Certified Emissions Increases. The EU is planning to introduce an emissions trading scheme in 2005 and other Annex I Parties are expected to follow suit.

Where IFI financing exists, the share of Certified Emissions Increases should be apportioned to governments according to their relative contributions or shareholdings in the IFI itself or, in the case of non-core funding, according to their relative contributions to the specific IFI program. Determining the level of Certified Emissions Increases would be the subject of third party verification, as is currently envisaged for the CDM. The risk, as with any baseline-and-credit system like the CDM, is that emissions calculations are based largely on hypothetical scenarios and are therefore never truly accurate.

According to the rules governing the operation of international financial institutions such as the World Bank, without their intervention, the project would not occur. This is one of the rationales for multilateral development assistance: the public sector must step in to support development projects where private capital markets cannot get the right returns and are unwilling to take on the risk. Thus, it can be inferred that any IFI-funded project is "additional," just as CDM projects are supposed to be additional. This removes the complication of identifying and implementing an additionality test in the case of IFI involvement. Other projects may proceed without IFI financing and, in such cases, it may be necessary to identify other additionality tests. For instance, the only subsidy involved in a project may be an export credit, a guarantee or insurance supplied by an ECA but this type of support is not subject to intrinsic additionality tests and often follows business-as-usual lines. In such cases, the burden of proof would have to lie with the project sponsor to prove the non-additionality of the project.

However, legitimate sustainable development projects should not be subject to a Dirty Investment Mechanism carbon debit. The debiting for Dirty Investment Mechanism projects would therefore have to be restricted not simply to additional projects, but rather to additional projects fulfilling specific carbon leakage criteria. These criteria could be developed as part of a 'negative list' of sectors and technologies –

the converse of what was proposed by the EU as a positive list for the CDM at COP-6 in The Hague – or by devising methodologies to determine whether the benefits of individual projects would be used to alleviate poverty and contribute to sustainable development. These criteria should ensure that the Dirty Investment Mechanism does not apply to projects fulfilling the policy commitments set out in the previous section. The burden of proof would therefore be on the project sponsors who would have to prove that the investment contributes to poverty eradication, changing unsustainable patterns of consumption and production and/or preventing dangerous climate change.

The greatest problem with a Dirty Investment Mechanism is that it could be seen by developing countries as a means of introducing developing countries targets before industrialized countries have fulfilled their commitment to leading on emissions reductions. Currently, developing countries have no targets under Kyoto as part of the application of the principle of common but differentiated responsibilities. However, a Dirty Investment Mechanism could be negotiated multilaterally as part of the phasing in of commitments for some rapidly industrializing developing countries, as long as sufficient funding was also in place to provide development alternatives. As developing countries take on carbon budgets under a new regime of participation in the longer term, a carbon debiting via the Dirty Investment Mechanism, like the CDM, would become redundant.

## **B. Border tax adjustments**

As we have seen, climate-related trade measures may have to be protected as Specific Trade Obligations in order to survive WTO challenges. If the WTO's CTE negotiations result in a conservative line being taken regarding what constitutes a Specific Trade Obligation, this may require amendment of the Kyoto Protocol or a new COP decision. However, border tax adjustments (BTAs) are already allowed under the General Agreement on Tariffs and Trade (GATT) as long as they do not discriminate against foreign goods. Unlike many of the measures outlined in the previous section, BTAs would not need special protection from trade rules, nor would they require the sanction of a multilateral agreement in order to be enforced.

A BTA is a tax that is levied on imported goods (or given as a rebate to exporters) to ensure that imports carry the same fiscal burden as domestically produced goods (or exported goods do not suffer). Usually, BTAs apply to the good itself. However, BTAs on embedded substances, such as carbon, could be introduced and administered in the same way as taxes on substances found in products are. For example, a BTA was introduced under the 1986 US Superfund Amendments and Reauthorization Act to reinforce the domestic US Superfund tax on petrochemicals – the Superfund Chemical Excises. This BTA taxes imported goods containing taxable chemicals as well as imported goods that do not contain taxable chemicals but have used taxable chemicals in their manufacture. This last type of good, referred to as a 'taxable substance,' is taxed on the basis of the amount of the taxable chemical that would be used to produce the good if it had been produced using the dominant method of manufacture in the US. No domestic version of this exists under the Superfund tax regime.

On the basis of this analysis of the Superfund tax, a study by the Center for a Sustainable Economy concludes that, "it is not necessary for all of the atoms in the taxable chemical to be physically incorporated into the taxable substance. The measure of the amount of tax on taxable substances for BTA purposes is the tax on the materials used in the manufacture of the taxable substance. This tax is not prorated by mass, weight or value when only a portion of the taxable chemical is incorporated into the taxable substance, provided the taxable chemical has been consumed in the manufacturing process. Thus the Superfund taxable substance BTAs are BTAs on the manufacturing processes, not on physical products."<sup>32</sup>

Despite using a calculation based on method of manufacture, the Superfund border tax adjustment was deemed acceptable under GATT in response to a request launched by the EU, Canada and Mexico

because it did not treat imported goods differently from goods made in the US. A penalty tax applied under the same regime was not deemed unacceptable because it did treat foreign goods differently from those manufactured in the US.<sup>33</sup> However, some commentators believe that the introduction of BTAs on embedded carbon may not be so easy. A discussion on this issue at a seminar organised by the Royal Institute for International Affairs and the International Institute for Sustainable Development concluded that, "There is no consensus on whether such a tax would be found legal under GATT if challenged."<sup>34</sup>

Another example of a process-oriented BTA is the BTA administered as part of the Ozone Depleting Chemicals Tax, another US tax. Even where taxable substances are physically present in the product, the tax applies to the consumption of Ozone Depleting Chemicals, not their presence. This tax has never been challenged, either under GATT or WTO rules - perhaps because it supports the objectives of a Multilateral Environmental Agreement, the Montreal Protocol. Once the Kyoto Protocol comes into force, it, too, might hold similar sway if challenged under GATT or WTO rules.

The most obvious problem with BTAs is that domestic taxes need to be in place in order for BTAs to be legal. Without the introduction of carbon taxes, BTAs would become yet another trade measure that would need to be protected as a Specific Trade Obligation and negotiated multilaterally. However, the most common method of reducing the emissions of carbon-intensive sectors in Annex I countries is likely to be through emissions trading schemes, domestic and international. The EU scheme is expected to be up and running in 2005 while other countries, such as Norway and Japan, are also expected to introduce their own schemes to meet their Kyoto obligations.

According to the Center for a Sustainable Economy, it is unwise to put a low BTA on a wide range of imported goods because it becomes very expensive to administer. This suggests that even if a domestic tax on carbon is administered across a wide range of products, only the most carbon-intensive goods should be subject to a BTA. However, pressure from affected industries that are concerned about their competitiveness may result in the tax being applied more widely than makes economic sense in order to improve the political acceptability of the domestic instrument. Moreover, evidence suggests that if the tax is big, there will be attempts to evade the tax and significant enforcement efforts will be essential if the tax is to have an effect on production methods.<sup>35</sup>

Another potential problem is that, unless the dominant method of manufacture in the importing country is employed to calculate the carbon input of imported products, information requirements will stretch to the firm or plant level in the exporting country and verification will become complex and expensive. This is further complicated by the fact that the production of many carbon-intensive goods will occur in more than one country. However, if a BTA relies on domestic manufacturing standards to calculate inputs, the tax may not apply to the full amount of embedded carbon, thereby undermining incentives for increased efficiency overseas.

### **C. Embedded carbon credit-debit system**

The current system of carbon accounting measures emissions at the point of generation. This system is based on assigning responsibility for climate change on producers of emissions, rather than accounting for emissions where the good or service that generated emissions is consumed. However, it is possible to envisage a system in which the embedded carbon associated with imports or exports is added or subtracted from national inventories.<sup>36</sup> This would be possible to achieve in a global system where all additions and subtractions could be accounted for by cross-checking national inventories, assuming that monitoring and verification systems were adequate in all countries.

Calculating embedded carbon would require considerable methodological work and accounting for embedded carbon in national emissions inventories would require new negotiations under the Kyoto

Protocol. Getting from the level of national registries to the company level is quite complicated and life-cycle analysis for products from individual companies and factories would have to be conducted. Even in countries developing emissions trading schemes, i.e. with emissions entitlements for individual installations like factories and power plants, some sectors, particularly transport, will be deliberately left out.

Could this idea be extended to prevent carbon leakage by accounting for imports from countries outside a system of carbon constraints? For instance, if the US or India did not join in the next round of emissions reductions but were exporting aluminum to Annex I Parties, could an embedded carbon debit be applied to the importing country? This is theoretically possible, although the political obstacles would be substantial. Like the Dirty Investment Mechanism, this type of system could be seen as a way of introducing developing country emissions commitment by the back door. Again, this type of system could play a role in a transitional system. The major advantage of an embedded carbon credit-debit system over BTAs is that carbon taxes would not need to be in place in the importing country.

### III. CONCLUSIONS AND RECOMMENDATIONS

If dangerous climate change is to be avoided, global emissions will have to peak in the next 20 years. Given that energy infrastructure has a life span of 25 years or more, investments must now start to reflect this climate imperative. However, much of the investment in developing countries is currently fossil fuel intensive and supported by transnational subsidies from IFIs and ECAs. The reform of IFIs and ECAs is proceeding slowly, but there are clearly other ways to reorient investment in developing countries away from fossil fuels to clean energy and production methods.

The policy options that have been identified are the following:

- *Policy coherence.* The implementation of commitments arising from WSSD and the UNFCCC process should be coordinated and systematic in order to avoid ecological dumping; to support this objective, reporting requirements should be reinforced. Projects and policy measures that contribute to multiple objectives could be prioritized.
- *Specific trade obligations.* In order for many of the WSSD and UNFCCC commitments to remain unchallenged at the WTO, they may have to become specific trade obligations. In the case of the UNFCCC and the Kyoto Protocol, this may mean amending the treaty text itself, for instance as part of the Compliance Agreement, or by negotiating a specific COP decision on trade-related measures establishing them as specific trade obligations.
- *Dirty Investment Mechanism.* A project-level mechanism could be developed to penalize companies engaging in ecological dumping, most simply through domestic emissions trading schemes. Project criteria would have to have developed to ensure that a Dirty Investment Mechanism did not apply to projects fulfilling WSSD or UNFCCC and Kyoto policy commitments. Project sponsors should be required to prove that their investments contribute to poverty eradication, changing unsustainable patterns of consumption and production and/or preventing dangerous climate change.
- *Border tax adjustments.* BTAs are already allowed under GATT as long as they do not discriminate against foreign goods. Therefore, BTAs would not need special protection from challenges under international trade rules, nor would they require the sanction of a multilateral agreement in order to be enforced. However, carbon taxes would have to be introduced in importing countries and the information requirements of such a scheme would be complex.
- *Embedded carbon debit-credit system.* National inventories could be made to account for the embedded carbon associated with imports. However, significant methodological work would be required and such a system would require renegotiation of Kyoto accounting rules.

The most diplomatically problematic options are the Dirty Investment Mechanism and the embedded carbon debit-credit system because they could be seen as an indirect way of introducing developing country emissions commitments. However, given that both mechanisms are actually debiting carbon to the country that is benefiting from the carbon subsidy, they would actually not place any carbon burden on the developing countries directly—only the projects that take place within their borders that do not support

sustainable development goals. Further, these types of mechanisms could form part of a transitional system under Kyoto to eventually include big developing country emitters. So, for example, while Norway might be debited for carbon emitted in India because the project was financed by Norway's development agency, but there was no local development benefit, India would be put on notice that, eventually, these carbon emissions would be calculated as India's. This could be considered a "soft" disincentive for India to invest in dirty development projects, with no immediate consequences for India.

In order to engage developing countries in a discussion about new climate measures, industrialized countries must fulfill their commitments, both in terms of emissions reductions and mobilizing the funds necessary for developing countries to adopt mitigation measures. How the first round of Kyoto commitments is achieved is important: emissions must be reduced without relying on non-additional CDM credits and sinks in order to demonstrate that moving to low carbon economy is possible and has economic benefits.

All the measures outlined in this report will be unpopular, particularly among rapidly industrializing developing countries and Kyoto non-Parties or industrialized countries with high business-as-usual emissions growth. However, the political will to tackle greenhouse gas emissions will have to be mustered and these countries will always have to be persuaded if we are to avoid the worst impacts. In the meantime, some countries will have to take the lead in adopting new climate policies.

## Endnotes

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- <sup>17</sup> FCCC, article 4.5
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- <sup>23</sup> Decision 5/CP.7, *Implementation of Article 4, paragraphs 8 and 9, of the Convention*, contained in FCCC/CP/2001/13/Add.1
- <sup>24</sup> Draft decision -/CMP.1, *Matters relating to Article 3, paragraph 14, of the Kyoto Protocol*, contained in FCCC/CP/2001/13/Add.1

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