

ADAPTATION FUNDING AND THE WORLD BANK INVESTMENT FRAMEWORK INITIATIVE

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Executive Summary

The recent World Bank Report on ‘Clean Energy and Development: Towards an Investment Framework’ [WBFI 2006] estimates that ‘climate-proofing’ investments in developing countries – excluding additional investment needed to reduce the exposure to current climate risks and unavoids climate related damages – would cost between \$9 and \$41 billions annually. This raises two key questions that the government working groups in Mexico might wish to consider:

1. *How are the costs of climate-proofing investments in particular, and adaptation in general to be covered and managed?*

Depending on the types of costs related to adaptation and impacts, different forms of disbursement will have to be used to achieve the desired results. A number of financial tools are already in place or are being introduced which could be used for this purpose. Apart from the traditional instruments used in climate change funding to-date – such as the hitherto sole operating entity of the financial mechanism of the UNFCCC, i.e. the GEF – there are the following:

- The World Bank concept of an Investment Framework – this is probably most suited to deal with the transfer of adaptation technologies;
- Climate impact risks could be addressed through insurance-related instruments - these might be strictly climate related, or more general, such as the proposed European Commission / World Bank Global Index Insurance Framework;
- The funding of relief efforts connected with climate/weather related disasters is probably best dealt with through the proposed reform of existing disaster relief fund, administered by the UN Office for the Coordination of Humanitarian Affairs (OCHA);and

- Economic shocks due to whether related disasters could be dealt with through the Exogenous Shock Facility of the IMF.

The instruments for disbursement of adaptation funding thus need not deal solely with climate change aspects, nor is necessary that they should be governed exclusively by the UNFCCC (COP) or the Kyoto Protocol (COP/MOP).

2. *How to make adequate and reliable funding available for adaptation?*

The key issue is not so much how to spend adaptation money, but how to raise it, or, to be more precise, how to make adequate and reliable funding available in a fair manner, as highlighted in the Marrakech Accords decisions::

- “predictable and adequate levels of funding shall be made available to Parties not included in Annex I”[Art.1.b; 7/CP7]
- “appropriate modalities for burden sharing among the Parties included in Annex II need to be developed”[Art.1.d; 7/CP7]

To effectively implement these decisions a funding tool is needed, possibly in the form of a legal instrument– under the UNFCCC. This would provide the UNFCCC Parties with the means to monitor both sovereign and private sector contributions.

It is only through capturing private sector funding will we be able to secure funding close to the figures estimated the World Bank. One way to do this might be to introduce an adaptation levy on international air travel, akin to the solidarity contribution currently piloted in France. Despite some resistance, such ‘innovative financing’ ideas are gaining acceptance, for it is only private sector financing which ultimately might be to provide the sort of sums estimated by the World Bank Report to be required for adaptation funding.

A. *The Climate Change Challenge*

The structure of this briefing notes follows that of the World Bank Investment Framework (WBIF) Report's second part on 'Adaptation to Climate Change,' beginning with a section on 'The Challenge of Climate Change'. The Report paints an astute picture of this challenge, as illustrated in the following quotations:

- “The Earth’s climate is already changing because of human activities, ..., and is projected to continue to change in the coming decades. [T]his will undermine economic development and the ability to achieve many of the MDGs.”[§52]
- “Even with a successful mitigation program, a significant degree of climate change is a foregone conclusion”[§53]
- “Developing countries, and poor people within developing countries, are already suffering the greatest impact from climate related disasters, which threaten to undermine their development.”[§56]

The one point which could be raised in criticism is that, although referred to twice in the Report's Executive Summary – namely in recognising that “funding for energy-related climate change must be additional”, and that “developing countries are not expected to bear the additional costs of a low-carbon economy” – the concept of '*common but differentiated responsibility*' is essentially absent in the body text of the Report, which is curious, given its particular relevance to adaptation and impacts.¹

This is not to say that it is not implicitly addressed in some of the language of the Report. For example, §55 states that “increasing resilience against future climates brings additional costs that many developing countries are unable to bear, or unwilling to bear as they see these costs as being imposed by actions beyond their control.”

It is, of course, true that many developing countries see these costs as imposed by actions beyond their control, but this is not the reason why they are unwilling to bear the additional costs. After all, acts of God are also beyond their control, without giving rise to a similar unwillingness to pay. The reason for the unwillingness is the fact that industrialised countries are seen to be largely *responsible* for the costs and as having effectively imposed these cost on them. And the situation is unlikely to resolve itself, as indicated in the example cited in §58 of the Report: “even if carbon dioxide could be stabilized at 550ppm, developing countries are projected to lose between 15 to 25 percent of their wheat productivity (mostly in Africa) while in developed countries productivity will rise by 10 to 30 percent (mostly North America and Russia).²”

B. Strategies to Manage Climate Change Impacts

“The G+5 countries include the largest populations vulnerable to climate change, but adaptation actions must extend to all developing countries.[§62] Most developing countries will seek, and require, assistance to meet the additional costs imposed by the

¹ As a matter of fact, it appears only once, in the context of Mexico expressing its support for the Gleneagles dialogue which “complements the Kyoto Protocol and the UNFCCC process, which has established the principle of ‘common but differentiated responsibilities.’”[§63]

² Fischer et al. (2005) draw upon IIASA and FAO models to conclude that over the next few decades the reductions in hunger that should follow global economic development will be partially counteracted by climate change, delaying significant improvement such as those sought in the MDGs by 2050 and beyond.

need to adapt to climate change.”[§72] But not just the need to adapt, but also to cope with the risk of residual impacts, and indeed with the cost of unavoided impacts. Indeed, it is useful to use the relevant distinction of the introductory paragraph of the WBIF Report section on *The Costs of Impacts of Climate Change and Adaptation* (Annex K, §1) between

- *costs of adaptive actions* carried out to reduce the impact of climate change, and
- *incremental costs of impacts* due to climate change.

B.1 Adaptation Costs.

Adaptation, like mitigation, is fundamentally an *impact reduction* activity with the aim to prevent, or at least reduce potential impacts to an acceptable level. Given the overall theme of the paper – proposing a multilateral investment framework – is not surprising that the part on adaptation proper largely focuses on technology (transfer) and on ‘climate-proofing’ of investments.

Technology. As concerns the role of technology, the strategy which is advocated is that adaptation will require a mix of transfer – particularly South-South – of existing technology, new technologies, and the revision of planning standards and systems (§64). It is specifically noted that the approach to adaptation needed will have “to address technologies that have not been adopted because of barriers or lack of finance, such as changing agricultural systems to be more resilient to weather shock, and building multipurpose water storage/hydropower infrastructure.”[§67]

The ‘Climate-proofing’ of Investments. Investment, particularly in the most vulnerable developing countries, faces risks from climate change additional to the often many other investment risks. The largest share of investment is from the (domestic) private sector, which dwarfs all other investment sources, i.e. foreign direct investment, as well as domestic and foreign public sector investments (ODA). And while capacity of the private sector to deal with climate variability is improved quickly, few private investors feel they have the information to effectively factor future climate risks into decision making. The WBIF Report suggests that in order to climate-proof this sort of (domestic) private investment, there is a need for new financial instruments, such as grants and concessional finance for early movers in adaptation, or an increased use for adaptation funding of GEF money and the money administered by it on behalf of the UNFCCC Funds (§70).

- Develop a systematic approach to screening of public investment for the impacts of climate change.
- Major effort to increase knowledge on the costs and benefits of specific actions for adaptation to existing capital stocks
- Develop and adopt a new generation of planning tools and best practice standards and approaches for both natural and built capital.[§77]

Disaster Management. Somewhat more unusual, but no doubt of equal importance, is the inclusion in the proposed adaptation strategy of improved disaster preparedness, in particular by seizing “opportunities to promote more appropriate zoning, infrastructure and if necessary institutions”. [§67] The paragraph discussing this starts with the

statement that “Climate related disasters will continue to occur even with the best adaptation to climate change.”

B.2 (*Incremental*) *Impact Costs*.

Following the official disaster management terminology [UN 1992], it is useful to distinguish between impact reduction and impact response, the former covering both mitigation and adaptation, and the latter largely concerned with impact damages as dealt with in relief, rehabilitation and reconstruction activities.³ In §67, the World Bank Report highlights the need to reduce the financial costs to developing countries of climate related events through disaster relief instruments and risk insurance.

Impact Relief. The need for reform of the funding of international relief efforts, particularly in light of an increased stress on relief due to climate change, has been recognized for some time – see, for example, Müller (2002) or SciDev (2003). More importantly that need has also been recognised by decision makers such as Gordon Brown, the UK’s Chancellor of the Exchequer and Hilary Benn, the Secretary of State for International Development, who stated in a recent opinion piece that the world ‘needs an international response that is more proactive in its ambitions and more coordinated in its reach – and quite simply gets more money support more quickly to where it is needed. ... For reconstruction to work, emergency assistance must also work ... So it is clear there is a need for a new humanitarian world fund into which donors pay and from which humanitarian coordinators can immediately draw funds when a crisis threatens.’ [IHT 2005] For this reason, the authors called for a reform of UN’s Central Emergency Revolving Fund, administered by the UN Office for the Coordination of Humanitarian Affairs (OCHA), as well as for a new ‘economic shocks’ facility at the International Monetary Fund (IMF).

As it happens, the IMF subsequently acknowledged that, in order to help reduce such economic shocks, external help has to be available quickly, and consequently created an *Exogenous Shocks Facility* (ESF) – in addition to its Emergency Natural Disaster Assistance (ENDA) – to provide “policy support and financial assistance to low-income countries facing exogenous shocks.” [IMF 2005] Given the importance of an immediate response, the ESF may be front-loaded, and is meant to be more concessional than ENDA, by providing loans at an annual interest rate of 0.5 percent, with repayments beginning 5½ years and ending 10 years after the disbursement. The money lent is raised by the IMF by borrowing from central banks, governments, and official institutions generally at market-related interest rates. The difference between these interest rates and the concessional rates paid by the borrowing countries is financed by contributions from bilateral donors and the IMF’s own resources. Bilateral donors can earmark contributions of subsidy resources. However the Fund also acknowledges that “many low-income countries experiencing such shocks may need additional concessional donor assistance.” [IMF 2005]

At about the same time (December 2005), the UN General Assembly adopted a resolution upgrading OCHA’s Central Emergency Revolving Fund. The upgrade – known as

³ To be sure, reconstruction should follow should involve ‘climate proofing’ and thus involve adaptation costs over and above the (incremental) impact costs. However, this section is devoted to these impact costs alone, as the cost for adaptation was dealt with in the previous one.

Central Emergency Response Fund (CERF) – is to “ensuring a more predictable and timely response to humanitarian crises,”[OCHA 2005] and aims to add a grant facility of \$450 million to the existing \$50 million of the revolving facility for “the provision of quick initial funding for life-saving assistance at the onset of humanitarian crises.” UN agencies and their implementing partners will be able access the fund within 72 hours of the onset of a crisis. As of 16 May 2006, \$262 millions have been pledged, and \$158 million committed or contributed (95 percent of which by European Union members, lead by \$70 million from the UK). Replenishment is through voluntary sovereign or private sector donations.

Insurance (-related) instruments. In §70, the WBIF Report suggests the creation of “new insurance instruments that focus on projected climates and discourage inappropriate practices ... to be established against a background of increasing concern about the large scale impact of climate change events on the private and commercial insurance portfolio.”

There have been a number of proposals on how to deal with the risk of residual climate (change) impacts, and how to manage unavoids impacts generally. Historically, the first such proposal in the context of the UNFCCC was introduced by the Alliance of Small Island States (AOSIS) in 1991. The proposal sought to establish a fund with mandatory contributions from industrialized countries to indemnify small-island and low-lying developing nations for losses resulting from sea level rise.

Some of the members of the recently formed Munich Climate Insurance Initiative (MCII) have also put forward a number of suggestions: A proposal by the Bonn/Germany-based NGO *Germanwatch* for an insurance-related mechanism ‘builds strongly on AOSIS ideas, but proposes cover for sudden-onset risks, including floods, droughts and windstorms, for public infrastructure. Like the AOSIS proposal, the fund would be capitalized through payments from developed countries.’[MCII 2005:4].

The Austrian International Institute for Applied Systems Analysis (IIASA), in turn, proposes a two-tiered climate change insurance-related mechanism. “The first tier is a global relief fund to cover losses that are either uninsurable or for which cover is unaffordable in poor countries. This tier would be covered by contributions from developed countries, much like that envisaged by AOSIS and Germanwatch, except the fund would be entirely discretionary. Based on the post-disaster needs of developing countries, it would provide discretionary assistance for relief and reconstruction; however, eligibility for post-disaster assistance could be tied to prescribed, stakeholder-led processes for credible efforts at reducing and managing disaster risks.”[MCII:4] The second tier takes the form of a global insurance facility to provide support for insurance initiatives taken by developing countries or regions, themselves.

In their IHT opinion piece, Gordon Brown and Hilary Benn furthermore called for a new, “front loaded, fast disbursing and readily accessible”[IHT 2006] *shocks facility* at the IMF, where afflicted countries could call not just for help with natural disasters, but also help to cope with commodity price shocks. Again, the idea – at least as concerns commodity price shocks, has been around for some time (for a detailed economically appraised proposal on an international commodity price insurance, see Bower & Kamel 2003), but it has clearly gained momentum over the last few years, as witnessed in the

recent initiative by the European Commission and the World Bank to launch a Global Index Insurance Facility “that would help countries to access insurance markets for price, weather, and natural disasters,” [ITF 2005] as announced at the 8th Annual Meeting of the World Bank’s International Task Force on Commodity Risk Management (ITF) on 19 May 2005 in Interlaken/Switzerland (for more on this initiative, see GIIF 2005)..

C. The Scale of Funding Needs⁴ and Sources of Financing

C.1 *The Needs: How much?* Annex K of the WBIF Report, on which this section is based, from the very outset introduces the important difference between costs of adaptation, and costs of climate change impacts.

Adaptation Costs. Neither of these costs are particularly well understood, but in the case of costing adaptation activities to ‘climate-proof’ investments, at least, there seems to be a ‘ball-park figure’ methodology, based simply on estimating certain percentages of the investment flows in question. As reflected in Table 1, the WB team’s estimate just for climate-proofing investments in developing countries – excluding additional investment needed to reduce the exposure to current climate risks – lies between \$9bn and \$41bn.

Table 1. Preliminary Estimates of Annual Adaptation Costs in Developing Countries.¹

		<i>climate sensitive</i>	<i>adaptation costs</i>	[USD 2000]
ODA & Concessional Finance	\$100bn	40%	10 – 20%	\$4bn – \$8bn
FDI	\$160bn	10%	10 – 20%	\$2bn – \$3bn
Gross Domestic Investment	\$1500bn	2 – 10%	10 – 20%	\$3bn – \$30bn
Total international costs				\$6bn – \$11bn
Total adaptation costs				\$9bn – \$41bn

Source: Table K.1, WBIF (2006)

The Cost of Impacts (‘Climate Change Damages’).

“There have been many attempts to estimate the costs of impacts due to climate change but with widely differing methods, different levels of inclusion (i.e. the impacts and regions analyzed) and assumptions about the rate of climate change and time preferences [discount rates]. ... The most common conclusion is that, with adaptation, many developed countries will benefit by 1°C temperature change while developing countries will be marginally disadvantaged. For 2° to 3°C, the impact on developing countries increases rapidly, with estimates often up to 5 – 10 percent reduction in GDP or much lower.” [§3, Appendix K]

⁴ The corresponding heading in the WB paper refers to ‘The Scale of Investment Needs’ which is too narrow to cover the funding needs for impact response measures.

Yet the problem with these (economic) studies lies not just in the diversity of their assumptions, but arguably also in the fact that they contain some serious methodological flaws. Take, for example, a recent economic study that “considers the impact of different discount rate frameworks on estimates of the social cost of carbon (SCC), a critical element in the cost-benefit analysis of climate change. The SCC is a monetary indicator of the global damage done by the emission of one extra ton of carbon today. In cost-benefit analysis of projects to control greenhouse gas emissions, the SCC is employed to measure the financial value of the damages avoided, and therefore the benefit of the mitigation project. The larger the SCC, the more attractive is investment in greenhouse gas emissions reductions.”[Guo *et al.* 2006:206]

It is well-recognised that – as one of the authors of that study put it – “there are two ‘ethical’ parameters that flow into a marginal damage cost estimate. The first is the aggregation over time (the discount rate). The second is the aggregation over countries (equity weighing).”[Tol 2005:2072] What seems to be less well appreciated is that – unlike in ordinary cost-benefit contexts, where what is compared are the costs and benefits to one and the same agent – climate change impacts/damages involve more often than not ‘perpetrators’ who are different – either geographically or in time – from their ‘victims’.

This distinction has a number of significant consequences, particularly as regards to the applicability of the cost-benefit methodology. While the victims have the right to demand compensation from the perpetrators for harm already done, they also have the right to be protected against further (unlawful) harm. In particular, the perpetrator cannot decide to continue to harm the victims without their consent, even if compensation is forthcoming. As Henry Shue recently put it,⁵ climate change is not just an issue of beginning to help, but more importantly, of ceasing to harm.

The cost-benefit methodology thus seems to be at least doubtful in the context where (mitigation) costs of one group are weighed against damages that they would have otherwise inflicted on another group. And this all the more so if the figures for the damages inflicted on the victims are discounted in accordance with the preferences of the perpetrators, as is the case for damages inflicted on future generations.⁶

In sum, estimates of the costs of climate impacts – be they in absolute terms or in relative, ‘social cost of carbon’ terms – are not only uncertain, but need to be scrutinised quite seriously before they are used in decision-making, which ought to be guided at least as much by Shue’s maxim.

C.2 The Sources: Who, Why and How? Acknowledging that “most developing countries will seek, and require, assistance to meet the additional costs imposed by the need to adapt to climate change” the WBIF Report concludes that “a major challenge over the

⁵ During a talk he gave to the Oxford University Globalisation and Sustainable Development Discussion Group at Merton College, 26 April 2006. I’m indebted to him for this insight (see also [Shue 2001]).

⁶ Apparently, “there is now a consensus that the social discount rate should be based on the ‘social rate of time preference’ (SRTP), which is the value society attaches to present consumption relative to future consumption. ”[Guo *et al.* 2006:207] It is difficult to see how such an Present-oriented ‘après nous le déluge’ approach could be reconciled with the demands of inter-generational justice (say as characterised by Rawl’s veil of ignorance), particularly if we are dealing with catastrophic scenarios.

next two years is to better scope the various ways to meet these financing needs”[§72] As to how this is to happen, the paper is slightly more equivocal. The relevant key paragraph (§72) starts out with the claim that “ultimately new financing instruments similar to those for clean energy will need to be explored for adaptation,” only to be followed two sentences later by the disclaimer: “Whether these costs require a new finance vehicle or whether they can be dealt with through existing mechanisms such as the GEF, Overseas Development Administration (ODA) and concessional finance through IFIs remains to be determined.”

What seems to be self-evident is that the different types of costs related to adaptation and impacts (discussed above) will likely have to be managed with different kinds of instruments. If an investment framework – as envisaged by the European Commission and the World Bank – is indeed best suited to facilitate the transfer and acceptance of clean energy (i.e. mitigation) technologies, then it is difficult to see why the same should not hold for adaptation technologies. At the same time it stands to reason that insurance-related instruments are better suited to deal with the issue of unavoided/residual impacts. And neither is probably best suited to deal with the funding problems of (international) relief efforts. In short, what is needed are different (financial) horses for different (cost) courses.

The key question in this context concerns the scope of these instruments. That is to say, would it make sense to create a relief fund only for climate-related disasters, or a investment framework specifically for adaptation related investments, or an insurance-related instrument exclusively for climate impacts? In some cases this would seem to be nonsense, in others the answer is not that self-evident. The MCII study, for example, suggests that “the insurance pools could cover only climate-related risks or, alternatively, all hazards. The latter would provide more diversification and thus lower requirements for capital backup. However, the private sector is more reluctant to insure geo-hazards because of added difficulties in risk assessment.”[MCII:4]

To be sure, this is not where the story on *how* to pay for adaptation/impact costs ends. The two issues on which the WBIF Report has been rather less than forthcoming is who should pay and, especially why? Yet these questions are, obviously fundamental, and they have an impact on the over-all architecture of an adaptation/impacts funding regime.

Take the case of the proposed insurance-related instruments for managing the risk of climate impacts. In general, it is the parties whose risk is managed, and who would otherwise have to bear the cost of the uninsured damages, who are expected to pay the relevant premiums. And if one were dealing with acts of God, the premium would hence have to be borne by the impacted parties. But since we are dealing with acts of men instead, the situation changes dramatically.

Insurance: who ought to pay? The ‘party at risk’. In the case of pollution, it is the polluter who is to bear the costs (‘polluter pays’) and who consequently carries the risk. According to the spirit if not the letter of (international) law,⁷ and certainly according to precepts of justice, there is no doubt that the parties who should have to pay are the parties responsible for the problem. In short, the insurance is an insurance not for the

⁷ “The Parties should protect the climate system ..., on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.”[UNFCCC Art.3.1.]

‘polluted,’ but for the ‘polluters,’ who accordingly should carry their proportionate share of the insurance costs. And the same is true for the costs related to climate change of the other envisaged instruments.

This could have an important architectural consequence for an international adaptation regime, for clearly it requires that there be some functioning instrument to collect these dues. Again, the need for such an instrument has been recognised for some time. The Marrakech Accords, for instance, contain the decisions that

- “predictable and adequate levels of funding shall be made available to Parties not included in Annex I”[Art.1.b; 7/CP7]
- “appropriate modalities for burden sharing among the Parties included in Annex II need to be developed”[Art.1.d; 7/CP7]

As it is not easy to see in the light of past experience [whatever happened to the past pledges for funding?] how this could be achieved without a proper legal instrument, the immediate question is again one of scope. Should one aim at a legal instrument governing all the funding under the UNFCCC (and the Kyoto Protocol?) or at one concerned only with adaptation funding, an ‘adaptation (funding) protocol’?

In this context it may be politically more acceptable to go for the narrow scope of an adaptation funding protocol, because negotiations for a general funding instrument would probably be burdened with, from a negotiation perspective, potentially lethal issues such as impact liability and the so-called ‘impacts of response measures’.

It is worth noting that while Art.1 (d) 7/CP7 concerns itself only with sovereign payments, Art.1 (b) clearly allows for both public and private sector funding. And there is little doubt that the latter will have to be harnessed much more successfully for there to be any chance of raising adequate adaptation funding. At the same time there is a need to avoid the mistakes that have thus far been made in that direction: The only true private sector funds currently envisaged to be raised for the purpose of adaptation is the 2 percent levy on the transactions of the Clean Development Mechanism (CDM). In other words, in order to raise money for adaptation, the private sector is discouraged to undertake a certain type of mitigation activities – indeed mitigation activities *in developing countries* – thus increasing the potential need for adaptation funding. This clearly cannot have been the intention.⁸

If anything, such an adaptation levy should be aimed at creating disincentives to emit greenhouse gasses, be it in the form of a levy on emission permits auctioned/handed out as initial allocations in emissions trading schemes, or in the form of a carbon-based levy on emissions hitherto not covered by the international regime, such as the ones generated by international bunker fuels, specifically international air travel. A forthcoming study [Müller and Hepburn, for more, see also Müller 2006] argues that such an instrument is attractive for several reasons: First, it would improve consistency in climate policy by ensuring that the aviation sector faces the carbon prices that are already imposed on other

⁸ However, given that the Adaptation Fund will be predominantly replenished through private sector contributions generated in developing countries, it could be argued that this fund should be operated by an entity which adequately represents the origin of these funds. Given that the potential beneficiaries are also exclusively from the developing world, it stands to reason that the operation of this fund should be a developing country matter.

sectors. Second, the distributional effects would probably be progressive, as aviation tends to be a luxury good, not just in the developing world. Third, the levy could help stimulate innovation in the air transportation sector, generating new abatement technologies. Fourth, to the extent that the appropriate levy would change behaviour and reduce travel by air, emissions would be reduced. Finally, if the price elasticity of aviation really is very low as is sometimes claimed by the industry then, while the levy would not significantly reduce emissions, it would *ipso facto* not significantly distort behaviour. This, in turn, would imply that air travel is indeed a suitable candidate for taxation according to the Ramsey (1927) ‘inverse elasticity rule’ (higher taxes should be imposed on goods with inelastic demand).

A ‘back-of-an-envelope’ calculation – based on the European Commission’s estimated revenue figures for the proposed EU aviation tax [IPS 2005], and an estimate of global sectoral passenger revenue [Wardle 2003] – suggests that such a world-wide aviation levy could well yield tens of billions of dollars annually, i.e. substantially more than is likely to be available through bilateral sourcing, and at least in the same ‘ball park’ as the WB adaptation cost estimates.

At the political level, the idea of an airline tax for the purpose of sustainable development is, despite US repudiation, gaining ground. According to a paper circulated by the French foreign ministry “the principle of innovative sources of financing is now receiving support from a large part of the international community, given that 79 countries backed the declaration of 14 September 2005 [on innovative financing for development],”⁹ including a number of European countries (Germany, United Kingdom, Spain, Estonia, Austria, Sweden, Luxembourg) and major emerging countries (Brazil, India). The industry itself, at present, seems to favour inclusion in emission trading schemes, yet ultimately they too could be harnessed to generate adaptation funding, provided the emission permits are auctioned as opposed to just given away (‘grandfathered’).

⁹ France (2006).

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