



To Earmark or Not to Earmark?

A far-reaching debate on the use of auction revenue
from (EU) Emissions Trading

Benito Müller

Oxford Institute for Energy Studies
EV 43

November 2008

The contents of this paper are the author's sole responsibility. They do not necessarily represent the views of the Oxford Institute for Energy Studies or any of its Members

Copyright © 2008
Oxford Institute for Energy Studies
(Registered Charity, No. 286084)

ISBN: 978-1-901795-80-6

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior permission of the Oxford Institute for Energy Studies.

This publication is made available subject to the condition that it shall not, by way of trade or otherwise, be lent, resold, hired out, or otherwise circulated without the publisher's consent in any form or binding or cover other than that in which it is published and without similar condition including this condition being imposed on the subsequent purchaser.

Acknowledgments

The author would also like to express his thanks to all the people who have helped him in putting together this paper, particularly (in alphabetical order): Eric Haites, Malcolm Keay, M.J. Mace, Steve Sawyer, Anju Sharma, Kit Vaughen, David Vincent, and others who prefer to be thanked in private.

About the author:

The author is Director Energy & Environment, Oxford Institute for Energy Studies, and Managing Director, Oxford Climate Policy.

benito.mueller@philosophy.ox.ac.uk

Contents

CONTENTS	3
EXECUTIVE SUMMARY	4
1 THE ISSUE.....	5
1.1 THE EU COMMISSION PROPOSAL.....	5
1.2 THE EU PARLIAMENT PROPOSAL.....	5
1.3 THREE MEMBER STATE OBJECTIONS	6
2. THE PRACTICE	7
2.1 SOME US EXPERIENCES	7
<i>The Comprehensive Environmental Response, Compensation, and Liability Act.....</i>	8
<i>The Lieberman-Warner Climate Security Act.....</i>	8
2.2 SOME UK EXPERIENCES	9
<i>The Climate Change Levy</i>	9
<i>The Renewables Obligation.....</i>	10
2.3 CONCLUSIONS WITH IMPLICATIONS FOR ETS AUCTIONING.....	10
3. SOME LITERATURE	11
3.1 WILLIAM MCCLEARY (1991), "THE EARMARKING OF GOVERNMENT REVENUE: A REVIEW OF SOME WORLD BANK EXPERIENCE"	11
3.2 SUSANNAH CAMIC (2006), "EARMARKING: THE POTENTIAL BENEFITS"	12
3.3 CONCLUSIONS WITH IMPLICATIONS FOR ETS AUCTIONING	13
4. THE CONTEXT: DEAL OR NO DEAL IN COPENHAGEN!	15
4.1 THE PAST.....	15
4.2 LESSONS LEARNED	16
<i>Developing Countries</i>	16
<i>Europe</i>	18
4.3 THE PRESENT.....	19
4.4 THE WAY FORWARD: HOW TO ADDRESS THE 'THREE OBJECTIONS'	20
<i>Objection I: Sharing the burden</i>	20
<i>Objection II: Subsidiarity and Competence</i>	21
<i>Objection III: Contrary to best practice.....</i>	21
<i>The Solution: "off-budget" ETS management.....</i>	22
ENDNOTES	23

Executive Summary

Should revenue from auctioning of emission permits in the EU Emission Trading Scheme (ETS) be earmarked – ‘hypothecated’ – for funding climate change activities, particularly in developing countries?

This question currently exercises EU decision-makers, with the EU Commission and Parliament in favour, strongly opposed by some Member States. The Commission proposed that 20% of the auctioning revenue *should* be used for climate change, while a parliamentary amendment would *mandate* all the revenue to be used for climate change, half of which earmarked for developing countries.

This may look like a storm in a tea cup about some arcane technicality, but that impression could not be farther from the truth, for what is at stake is the very possibility of an “agreed outcome” at the Copenhagen UN climate conference in December 2009. The reason is simple. ***The times when it was possible to sweeten a deal for developing countries with placebo funds and voluntary declarations*** – as happened at COP.6 in 2001 – ***have irrevocably past***. Lessons have been learned, at least in developing countries. For a deal at Copenhagen, there will have to be ***adequate*** financial flows from developed to developing countries. These flows will have to be ***new and additional to ODA, timely and predictable, equitable and appropriate***.

To reach the minimum adequacy level expressed in submissions by China, India, and the G77, the assessed contributions of EU Annex II Parties (= EU15) would have to be €53 billion *per annum*. Even when reduced to two-thirds by a complement of ‘international finance’ (Norwegian Proposal, IATAL etc.), the remaining funding requirement would still be tantamount to around ***half of the expected total revenue from EU ETS auctioning*** (in 2020), or – for the sake of comparison – two-thirds of current EU (grant) ODA. While of the order of ODA (and thus not economically ruinous!), transfers of this magnitude additional to ODA would be very difficult to raise through general taxation, but would be covered by the Parliament proposal. There are three main Member State objections to the Commission and Parliament proposals:

- (i) Some new Members object particularly to earmarking revenue for developing countries on grounds that they are not in Annex II.
- (ii) The proposals are seen to contravene the principle of subsidiarity by transferring tax competence from the Member States to the EU.
- (iii) Last but not least, earmarking is said to be contrary to “sound fiscal management,” and hence not permissible.

Objections (i) and (ii) seem to be justifiable, but can easily be addressed: There are good reasons to think that the relevant commitments concerning financial transfers laid out in the UNFCCC pertain to Annex II Parties only. Consequently, the new Member States should be excluded from having to take on such commitments. The subsidiarity and competence objection, in turn, actually only applies to the Parliamentary proposal, and this can easily be remedied by changing the modality of the relevant language from “shall” to “should”.

Objection (iii), however, is not tenable. For one, there are situations in which the literature suggests that earmarking is appropriate. Moreover, earmarking of revenue streams is actually common practice in most of the countries concerned (and beyond). The ‘trick’ has been to declare these revenues “off budget,” as has happened in the context of social security, national lotteries, environmental degradation/compensation. A particularly relevant example in the present context is the *UK Renewables Obligation* (RO). In short, there is absolutely no reason why the same could not be done in the case of ETS auctioning, in the EU or anywhere else!

Institutionally, this could be achieved by following the template of UK RO designating domestic/EU ***ETS-regulators*** charged with carrying out the auctioning on behalf of the Member States, with the revenue flowing into domestic ***off budget ETS Trust Funds***. In short, the way forward to a successful outcome in Copenhagen is to adapt the EU Parliament proposal to accommodate objections (i) and (ii) and ensure adequate finance for developing countries and to implement the amended proposal through off budget management of the ETS.

To sum up, given the problems of sending general tax revenue abroad, the real question therefore is not ***To Earmark or Not to Earmark?*** – it is ***Deal or No Deal in Copenhagen?***

I The Issue

“*ear-mark, v.* : To mark (animals) in the ear as a sign of ownership or identity; To set aside (money, etc.) for a particular purpose.”¹

To be quite clear, this paper is *not* about stamping ownership on animals, but about a debate currently going on – not to say ‘raging’ – between some Member States of the European Union (EU) and the EU Commission and Parliament about the wisdom and feasibility of ‘earmarking’ (or ‘hypothecating’) revenue from auctioning of emission permits in the third phase of the EU Emission Trading Scheme (ETS) to be used for climate change causes in general, and for climate change activities in developing countries, in particular.

I.1 The EU Commission Proposal²

At the beginning of the year, the European Commission issued a proposal for a Directive *to improve and extend the greenhouse gas emission allowance trading system of the Community*.³ It proposes that at least 20% of the revenue from auctioning emission permits under the EU ETS be used for a number of climate change related activities, among them *to facilitate developing countries' adaptation to the impacts of climate change*⁴ with the proviso that *particular priority should be given to addressing the needs of Least Developed Countries*.⁵

However, the adaptation needs of developing countries are not the only activity proposed for funding through this hypothecated share of auction revenues. They are competing with other areas, most of them concerned with ‘domestic’ issues such as contributions to the Global Energy Efficiency and Renewable Energy Fund, to the development of renewable energy (to meet certain EU targets), to carbon capture and storage, to address social aspects in lower and middle income households, and to adaptation to climate impacts in the EU. Moreover, the funding that *is* meant for the developing world is not just for adaptation, but also for avoided deforestation.

The proposed hypothecation could generate significant revenues. The auctioning of emission permits to the private sector entities covered by the EU ETS is rapidly gaining ground and is likely to play a significant role in the post-2012 phase of the scheme, with revenues expected to be in the region of €75 billion per annum in 2020.⁶ The Commission proposal would thus generate about €15bn annually for climate change causes (in 2020).

The proposed Directive leaves the choice of what exactly is to be funded from the proposed list of climate causes to the Member States. If one-tenth of this hypothecated money – the equivalent of a 2 percent levy on the total auction revenue – were to be spent on covering the funding needs of developing countries, that would generate payments in the region of €1.5 billion in 2020.

I.2 The EU Parliament Proposal

In early October 2008, the Environment Committee (ENVICom) of the European Parliament put forward an amendment to the Commission ETS proposal, concerning the ‘earmarking article’ (Art. 10, §3). Whereas the original Commission language suggested *at least 20% the revenues generated from the auctioning of allowances ... **should** be used* (i.e. earmarked) for climate change, the ENVICom amendment requires that the *100%* of the revenue *shall* be

used for climate change, with at least 50% for developing countries. Moreover, the range of issues to be funded by this amount differs significantly from the Commission proposal, in particular with respect to developing country funding:

- one quarter for funds to avoid deforestation and increase afforestation and reforestation in developing countries that have ratified the future international agreement, taking into account: the rights and needs of indigenous people; the preservation of biodiversity; and the sustainable use of forest resources;
- one quarter to reduce emissions in developing countries that have ratified the future international agreement, and to transfer technology to those countries, e.g. through the Global Energy Efficiency and Renewable Energy Fund;
- one half to facilitate adaptation to the adverse effects of climate change in developing countries that have ratified the future international agreement on climate change.

This means, given the Commission estimates of auctioning revenue, that in 2020, €37 billion would be earmarked for developing countries (€ 19 billion for adaptation, and €19 billion for mitigation and LULUCF in equal shares).

ENVICOM also suggested an amendment to the Commission's effort sharing proposal, suggesting a floor of at least € 5 billion in 2013, raising to at least €10 billion in 2020, for assessed contributions for developing country *adaptation*, which could be financed through auctioning.

I.3 Three Member State Objections

While it is not surprising that Member State Treasuries may not be overjoyed with these proposals, it is not easy to get hold of published reasons as to why they are opposing the Commission and Parliament proposals, as they apparently do – which is why the following summary had to be largely based on personal (Chatham House rule⁷) communications.

- (I) Some of the new EU Member States seem to object specifically to earmarking revenue for developing countries on the grounds that they are not members of Annex II of the UNFCCC.
- (II) More generally, one of the key objections to the proposals appears to be very similar to the objections that led to the collapse of the 1992 carbon/energy tax proposal,⁸ namely that, in contravention to the principle of subsidiarity, they would unacceptably transfer tax competence from the Member States to the EU level. Some of the Member States have apparently also put forward constitutional reasons “against any compulsory pre-allocation.”
- (III) Last but not least, earmarking is said to be contrary to sound fiscal management, not only because it restricts the decision-making powers of current government, but also because it pre-commits future generations and governments.

The aim of the following analysis is to look at the theory and practice of earmarking, as well as the context of the proposals at issue to judge the validity of these objections.

2. The Practice

Contrary to what one might expect based on the pronouncements of economists and Treasury officials, earmarking/hypothecation is actually a fairly prevalent practice around the world.

2.1 Some US Experiences

Although the US Treasury has lost some of its lustre as role-model in the recent financial crisis, it may still be interesting for its European counterparts to get some historic trans-Atlantic inspiration on the practice of earmarking. As it happens, the US practice is replete with the phenomenon of earmarking. Susannah Camic,⁹ for example, provides the following (non-exhaustive) list of Federal US taxes that are earmarked:

- (1) Social Security;
- (2) a ‘social security equivalent’ for railroad workers;
- (3) unemployment compensation;
- (4) Medicare;
- (5) a federal employees retirement tax;
- (6) an excise tax on sporting arms and ammunition that is earmarked for federal aid to wildlife restoration;
- (7) *a motorboat gas excise tax earmarked for conservation of aquatic resources;*
- (8) another motorboat gas excise tax earmarked for boat safety programs;
- (9) an excise tax on sport fishing equipment, earmarked for management, conservation, and restoration of fishery resources;
- (10) a motor fuels excise tax earmarked for highway construction and maintenance;
- (11) an excise tax on airline tickets and aviation fuels that is earmarked for capital and other expenditures of the Federal Aviation Association;
- (12) *an excise tax on domestically mined coal, earmarked for abandoned mine reclamation;*
- (13) *an excise tax on domestically mined coal, earmarked to compensate former mine workers who suffer from black lung disease;*
- (14) an excise tax on diesel fuel used in travel on commercial inland waterways, earmarked for construction and rehabilitation projects on those waterways;
- (15) *an excise tax on hazardous materials (oil and chemicals), earmarked for an environmental cleanup fund called Superfund;*
- (16) *another fuel excise tax earmarked for cleanup of sites with leaking underground tanks;*
- (17) an excise tax on commercial cargo upon loading or unloading to ships, earmarked for harbour maintenance;
- (18) an excise tax on vaccine purchase, earmarked for compensating victims of vaccine injury; and
- (19) *an excise tax on non highway recreational fuel use, earmarked for development and maintenance of recreational trails.*

Some of these schemes (highlighted in italics) are clearly more akin to the earmarking of EU ETS revenues as envisaged by the EU Commission and Parliament than others, particularly with respect to funding for developing country climate change activities. The most prominent among them is No. 15, the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA), also known as ‘Superfund,’ which will shortly be described in more detail. Another comparable instance of (proposed) earmarking which is directly linked to the topic of this paper is the *Lieberman-Warner Climate Security*

Act of 2008. While it has recently been voted out of the US Senate, it is widely seen as a cross-partisan indication of where the US will go after the November 2008 US election, and hence worth some special mention in this context.

The Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or ‘Superfund’) was enacted in December 1980 under the Carter Administration, and amended by the Superfund Amendments and Reauthorization Act (SARA) in October 1986 under the Reagan Administration. The Act established *a tax on the chemical and petroleum industries and provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over five years, \$1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites.*¹⁰

The tax revenue is channelled into a trust fund and earmarked to *provide for cleanup when no responsible party could be identified.*¹¹ The Superfund is committed to the “polluter pays” principle¹² and managed to raise more than \$1bn from polluters for clean-up activities in 2007 alone.

The Lieberman-Warner Climate Security Act¹³

On 6 June, the Lieberman-Warner Climate Security Act of 2008 (‘the Act’) fell 6 votes short of the 60 required in the US Senate to ‘invoke cloture’,¹⁴ but even so, the Act retains its significance as an indicator of what is likely going to happen under the new US administration.

Title XIII (*International Partnerships to Reduce Emissions and Adapt*) of the Act proposed an International Climate Change Adaptation and National Security Fund (‘the Fund’) to be established in the US Treasury, with the aim of financing an International Climate Change Adaptation and National Security Program (the ‘Programme’) from 2012 till 2050.

The first purpose of the Programme is *to protect the economic and national security of the United States where such interest can be advanced by minimizing, averting, or increasing resilience to potentially destabilizing global climate change impacts.*¹⁵ To this end, the Programme shall *support investments, capacity building activities and other assistance, to reduce vulnerability and promote community level resilience related to climate change and its impacts in the most vulnerable developing countries, ... impacts that affect economic livelihoods, result in increases in refugees and internally displaced persons, or otherwise increase social, economic, political, cultural or environmental vulnerability.*¹⁶

In order to raise revenue for the Fund, the Administrator of the US Environmental Protection Agency (EPA) would auction a percentage of the annual emission allowances of the proposed US emission trading scheme, starting with 1% in 2012, and raising gradually to 7% in 2050. This would amount to about \$1 billion in 2012, increasing to around \$2 billion by 2020 and \$6 billion by 2030.

The Act proposes that up to 60% of the funding goes to international funds, provided they are *created pursuant to the United Nations Framework Convention on Climate Change or an agreement negotiated under the Convention* and fulfil certain additional requirements, most of which clearly satisfied by the Adaptation Fund.¹⁷

2.2 Some UK Experiences

Like the US, the UK has quite a number of revenue raising schemes which work on the basis of some form of earmarking – including the National Insurance Scheme (operated through the National Insurance Fund (NIF), probably the largest of its kind in the UK, as well as the National Lottery.

National Insurance Fund. The NIF was established in its present form on 1 April 1975¹⁸ under the aegis of the then Department of Social Security. The annual revenue of the NIF – collected through NI Contributions (NICs) – currently stands at over £70bn. Strictly speaking, this revenue is not part of the Consolidated Fund of the Treasury – it is “off-budget.” It is earmarked for benefits (and administrative expenses) of the National Insurance Scheme, although surplus revenue (currently at around £40bn) can be lent to the government by way of investment in gilt-edged securities. Interest on these investments is paid to the NIF as it falls due. In 1999, responsibility for the NIF was transferred to the Inland Revenue, which has led some people to regard the earmarking in question as purely nominal. But strictly speaking, the NIF still exists, judging from the fact that it is still reviewed by the National Audit Office.¹⁹

The National Lottery was established in 1993, through the National Lottery etc. Act. It is regulated by the National Lottery Commission and operated by Camelot, a private operator selected through public tender. Since its inception, the scheme has provided on average £1.5bn – roughly 30% of current sales revenue²⁰ – of off-budget funding earmarked for ‘good causes’ (such as the arts and sport) through the operator. In 2004, the National Lottery joined *EuroMillions*, a multinational European lottery scheme.²¹ This *helped UK National Lottery sales to increase by £181 million.*²²

However, no doubt the most relevant cases of earmarking in the UK in the present context are those under the *Climate Change Levy* and the *Renewables Obligation*.

The Climate Change Levy

HM Treasury’s 2006 *Climate Change Levy Package* introduces the Climate Change Levy in the following words:

In 2001, the Government introduced the climate change levy (CCL) on the business use of energy to encourage business to find ways of reducing energy demand. To support business competitiveness, the introduction of CCL was accompanied by a 0.3 percentage point cut in employers’ national insurance contributions (NICs). By recycling revenue, CCL and NICs cuts incentivise energy efficiency while not increasing taxation overall on the business sector. Indeed, to date, the value of the NICs reductions outweighs CCL receipts. It is therefore a clear example of shifting the burden of tax from ‘goods’ to ‘bads’.

As part of the CCL package, the Government also introduced other measures to help business raise energy efficiency levels, including climate change agreements (CCAs); enhanced capital allowances (ECAs) for energy-saving technologies; and funding for the Carbon Trust.

Given the off-budget status of NICs, the Treasury could claim that the CCL does not involve earmarking insofar as the recycling element of the Levy is concerned. However, this argument would clearly be disingenuous, and furthermore would be invalid in the case of the ‘other measures’ and the Carbon Trust (which, in its first three years, received around £150 million from the CCL).

The Renewables Obligation²³

The Renewables Obligation (RO), in effect since April 2002, is a legislated obligation on licensed electricity suppliers in England and Wales to buy a certain (increasing²⁴) percentage of their supply each year from renewable sources. The obligation is monitored by the UK gas and electricity markets regulator, Ofgem, based on the issuance of renewable obligation certificates (ROCs, 1 ROC=1 MWh).²⁵ ROCs can be bought from eligible renewable energy generators and traded with other suppliers.

In the present context, the most relevant feature of the RO is that suppliers can choose to buy-out part of their obligation by paying Ofgem, which re-distributes the resulting revenue to suppliers in proportion to their renewable purchases as “recycled green premium.”²⁶ Although the Renewables Obligation is not direct public expenditure, it provides £21.5bn (on a discounted basis) for the subsidy of renewable generation by UK electricity consumers.²⁷ This is clearly a form of earmarking of a legally binding levy – officially sanctioned by the Treasury (albeit with a consumer protection proviso).²⁸ It circumvents the “domestic revenue problem” because it is outsourced to an independent entity - and hence not subject to consolidated budgeting constraints!

2.3 Conclusions with implications for ETS auctioning

Earmarking is used extensively in US tax and public sector financing, in particular to provide social and environmental services. Among the many instances of the practice, two are of particular interest, in the context of this paper, particularly as regards payments to developing countries:

- The *Superfund* (CERCLA) for reparation and compensation of damages from oil and toxic chemical spills, as ‘polluter pays’ precedent.
- The emissions trading legislation proposed by Warner and Liebermann, as precedent not only of the idea to earmark revenue from auctioning of emission permits, but also to earmark for significant payments (\$1bn to \$6bn) to developing countries, via the UNFCCC (*sic!*).

The UK Treasury has *de facto* earmarked on many occasions, but seems to be keen to restrict the practice to off-budget revenues, in order to avoid a *de jure* precedent, as observed in the National Insurance and National Lottery schemes. The two climate change related instances, the Climate Change Levy and Renewables Obligation, result in significant revenue flows. One of the key motivations of both these earmarking schemes was to obtain buy-in from the relevant business sectors – they are most likely better-off under the earmaking than if the revenue were to go into the general budget pot. Under these circumstances, it is rather surprising that the European business sector (in particular, the segments that are, or are likely to be covered by the ETS) have been quiet in this debate. A wake-up call may be in order, for the happy days of windfall profits from grandfathering emissions permits are over, and they will *not* be here again! Significant auctioning is inevitable, and the rules are being written now. Once they are set, it will be very difficult to change them.

3. Some Literature

Even though the scholarly literature on earmarking of taxation to pay for public goods is less extensive than one might expect – indeed it has been referred to as “sparse”²⁹ – it is still beyond the scope of this paper to give a comprehensive account of it. This section aims merely to give a flavour of the sort of arguments that have been put forward, particularly those which do not subscribe to the common wisdom (which as such, is presumably well known), with a view to providing useful insights for the discussion in the next section.

3.1 William McCleary (1991), “The Earmarking of Government Revenue: A Review of Some World Bank Experience”

The World Bank Research Observer, vol. 6, no. 1 (January 1991), pp. 81-104

Given its extensive application (see Section 2), it is somewhat surprising to find the received wisdom – not just among treasury officials, but equally among economists – as earmarking being bad practice. William McCleary – former lead economist in the Europe, Middle East, and North Africa Regional Office of the World Bank – attributes the fact that earmarking has few supporters among economists and public administrators to the following reasons:³⁰

- 1) It leads to a misallocation of resources, with too much being given to earmarked activities and not enough to others.
- 2) It hampers effective budgetary control (depending to some degree on whether provisions are embedded in statutes or in the constitution).
- 3) It infringes on the powers and discretion of the legislative and executive branches of government.
- 4) It introduces inflexibility into budgets: changes come only after a lag, and earmarking systems continue after their usefulness has been served.

Criticism of earmarking, according to McCleary, *rests mainly on a notion of government as a single will, or government decision-making as a perfect reflection of the wishes of the population, under which decisions about spending and taxation are made such as to improve welfare (even if implicitly)*.³¹ However, he concedes, that under slightly more realistic assumptions *earmarking may take on a more favorable coloring*.³²

McCleary’s practical objection to earmarking rests on the observation that “in practice, it is difficult to achieve pricing and taxation arrangements that will allocate resources appropriately for the service in question and yet require few administrative decisions. Often, efficient pricing and taxing lead to unbalanced budgets for the earmarked fund and hence to interdependence with the general budget.”³³ The stated aim of the paper is to look at earmarking through the eye of “lessons from the real world” – i.e. World Bank case studies – which, according to McCleary, *would appear to bear out the skepticism of the majority about earmarking: in general, it has not worked very well. The article, therefore, concludes by cautioning against the practice except under certain defined and restrictive conditions*.³⁴

Despite this ‘official’ conclusion, McCleary is more of an agnostic than an antagonist of earmarking, for he admits at the very beginning of his paper that economic theory provides some justification for earmarking. By assigning revenue from specific sources to specific purposes, a government can facilitate agreement about increasing both revenue and expenditure in cases in which there would be no consensus about raising either separately. Earmarking may also protect high-priority programs from shifting majorities, inefficiency and corruption.

McCleary points out the defects cited by the critics of earmarking are the virtues cited by its proponents, who argue that rigidity and limitations on the possibility of reallocating resources can sometimes be desirable.³⁵

- 5) Earmarking gives more assurance of minimum levels of financing for public services that governments consider worthy, thus avoiding periodic haggling within the bureaucracy or between the bureaucracy and the legislature over appropriate levels of funding.
- 6) Greater stability and continuity of funding may lead to lower costs because of speedy completion of projects.
- 7) By linking taxation with spending, earmarking may overcome resistance to taxes and help to generate new sources of revenue.

Somewhat paradoxically, given his ‘official’ conclusion, McCleary ends his paper by stating: *however much the International Monetary Fund and the World Bank have condemned it in the past, there is no general presumption against earmarking. In theory, as Buchanan, Goetz, and other public-choice economists have shown, earmarking may make agreement possible on increasing revenue and expenditure when there would be no consensus about either separately.*³⁶

3.2 Susannah Camic (2006), “Earmarking: The Potential Benefits”

Pittsburgh Tax Review, Vol.4, 2006:pp.55-83.

Susannah Camic wrote her paper on the potential benefits of earmarking due to concern over the ‘massive political assault’³⁷ waged against progressive income taxation, the mainstay of the US tax system. Earmarking could significantly strengthen the tax system, not least *because Americans, in their recent history, have been fairly tolerant of taxes that directly finance popular social programs.*³⁸

Camic’s paper aims to demonstrate, in particular, that earmarking can trigger *potent political effects, both symbolic and institutional* [with a significant] *potential to increase the system’s stability, revenue yield, and progressivity.*³⁹ For this purpose, she introduces the following hierarchy of *normative benefits of earmarking*:

First-Order Benefits:

- 8) Earmarked taxes constrain the budget-writing process;
- 9) Earmarked taxes provide tax policy information.

Second-Order Benefits:

- 10) Increased stability and predictability of spending;
- 11) Increased revenue yield;
- 12) Increased progressivity.

The first of the ‘first-order benefits’ (a) is a perfect illustration of McCleary’s dictum that in the context of earmarking, the defects cited by its critics are the virtues cited by its proponents. What is more interesting in the current context is her reference to the analysis of Eric Patashnik⁴⁰ – one of the leading scholars in the field – as to how these constraints of the budget-writing process come about: First, earmarked taxes in the US go into trust funds. Second, they can have “off-budget” status (such as Social Security). The paper also introduces its own taxonomy, based on three characteristics, namely

- involving a pre-commitment (of future leaders and generations),

- being contributory, in the sense of the beneficiaries being the same as the contributors, and
- involving an *entitlement*, in the sense that its beneficiaries have *an absolute right to a (usually monetary) benefit granted immediately upon meeting a legal requirement*.⁴¹

Table 1: “Typology of Earmarked Taxes” Camic (2006)			
Contributory		Non-contributory	
Entitlement	No entitlement	Entitlement	No entitlement
Type 1	Type 2	Type 3	Type 4
Social Security	Motorboat. tax for boat safety	Coal tax for workers disabled by black lung disease	Ammunitions tax for wildlife
Railroads workers social security equivalent	Fuel tax for highways		Motorboat gas tax for aquatic resources conservation
Medicare	Airlines tax for the FAA		Sport fishing equipment tax for sport fish conservation
Federal employees retirement tax	Inland waterways tax for waterways maintenance		Coal tax for abandonment mine reclamation
	Cargo tax for harbor upkeep		Superfund tax
			Fuel tax for underground tank leakage cleanup
			Fuel tax for recreational trails

The Issue of Pre-commitment. Camic’s first characteristic, namely that of involving a *pre-commitment* may be surprising, for it seems to be a common belief that earmarking *necessarily* means to pre-commit oneself. However, according to Carmic when democratic theorists object to pre-commitment, they presume that when a leader pre-commits, she necessarily commits someone – who is not herself – to certain actions over the course of future generations. This, Camic contends, is not true: *while, by definition, earmarked taxes involve some pre-commitment of revenues, they do not inherently entail the long-term pre-commitment of future actors. In this sense, earmarking in no way necessarily removes tax decisions from the democratic process.*⁴² The key message out of Camic’s analysis is that earmarked taxes may lend the tax system a *greater stability and predictability*, help the government *raise more revenue*, and *increase progressivity*.⁴³

3.3 Conclusions with Implications for ETS Auctioning

McCleary’s ‘real-world’ rejection of earmarking was based on three case studies (based on World Bank evidence):

- Highway Funds in developing countries, particularly in the Central African Republic, Colombia, Ghana, Mali, and Zaire;
- Excessive earmarking in Turkey and Colombia;
- Colombia's municipal valourisation tax.

Of these, only the first two were deemed to have given earmarking a bad reputation,⁴⁴ and it is at least questionable whether the lessons learned from the other two would be applicable to the issue of earmarking EU ETS auctioning revenue. His key theoretical objection was essentially that of having the earmarked revenue flow decide the level of the good to be provided,⁴⁵ which was seen to create inefficiencies when it meant an over-supply of the good, just because the money had to be spent. Given the expected costs of climate change activities, particularly in the context of funding for developing countries and the “domestic revenue problem”, it is highly unlikely that this is going to happen. Camic, in turn, has shown that the (standard) objection of pre-committing future decision-makers and generations raised by some Member States is not tenable.

The case for earmarking, as it emerges from the two literature samples can be summarised as follows:

- (i) Earmarking gives more assurance of minimum levels of financing for public services that governments consider worthy, thus avoiding periodic haggling within the bureaucracy or between the bureaucracy and the legislature over appropriate levels of funding;
- (ii) It increases the stability and predictability of spending, which may lead to lower costs because of speedy completion of projects.
- (iii) By linking taxation with spending, earmarking provides tax policy information which may overcome resistance to taxes and help to generate new sources of revenue.
- (iv) It may increase yield and progressivity of the revenue.

Obviously, there may be other arguments both for and against earmarking than the selection taken from just two sample articles, but it stands to reason that the ones that are listed here are the core ones. And furthermore that they confirm the usefulness of earmarking ETS auctioning revenue, particularly for the purpose of funding developing country climate change activities.

4. The Context: Deal or No Deal in Copenhagen!

To understand the present and plan the way forward, one has to be aware of the past and the lessons learned from it.

4.1 The Past

Following repudiation by the US administration in March 2001, the fate of the Kyoto Protocol hung in the balance. It was clear that it could not be saved without buy-in from developing countries. This is the key reason why the political agreement at COP.6bis (the *Bonn Agreement*, July 2001) contained provisions for two new funds – the LDC Fund and the Special Climate Change Fund (SCCF) – under the financial mechanism of UNFCCC, as well as confirmation of the *establishment of the adaptation fund ... to be financed from the share of proceeds on the CDM project activities and other sources of funding*.⁴⁶ According to M.J. Mace, it was quite clear that *these three funds were intended to sweeten the Marrakesh package of decisions for developing countries*.⁴⁷

The *Earth Negotiation Bulletin*, the semi-official reporting organ of the negotiations, summarised the outcome of the finance negotiations that followed the Bonn Agreement as follows:

Although the agreement recognizes the need for 'new and additional funding,' and establishes three new funds, no specific funding level is identified and there are no new legal requirements on countries to provide funding. Pronk's suggested US\$1 billion became an unrealistic option with US withdrawal from the Protocol. ... From a developing country perspective, the texts mirror the compromise that they made in the Bonn Agreement, under which they lost out on their previous insistence on mandatory funding levels or any setting of funding levels. As one developing country delegate expressed it:

They have shown us the blank checks, ...

... now the question is will they actually enter any figures.⁴⁸

Instead of Jan Pronk's (the Dutch President of the Conference) billion, there was a joint political declaration made by the European Community and its Member States, together with Canada, Iceland, New Zealand, Norway and Switzerland, on their preparedness to collectively contribute €450 million/US\$410 million annually by 2005, with this level to be reviewed in 2008.⁴⁹ This was to be made up by *contributions to GEF climate change related activities; bilateral and multilateral funding additional to current levels; funding for the special climate change funds, the Kyoto Protocol Adaptation Fund and the LDC fund; and funding deriving from the share of proceeds of the Clean Development Mechanism following entry into force of the Kyoto Protocol*.⁵⁰

At the time, the fact that contributions to the GEF and the share of the proceeds from CDM projects may count toward the overarching goal of the Declaration was seen to *significantly reduce its ambition*.⁵¹ While it is curious that the CDM adaptation levy, an international tax, should be counted in this manner, this option did not really materialise until now, as the Adaptation Fund was not operationalised until very recently.. The overall achievement of the pledge is difficult to judge, since even though the Parties involved were meant to publish their performance record in their National Communications, there does not seem to be an independent review.

Moreover, at the time of writing (November 2008) it is unclear whether the contribution levels are being reviewed, as stipulated in the announcement of Declaration. It would not be surprising if they were not, simply because it has become clear that the whole format of the Declaration has outlived its usefulness, particularly in the context of the Bali Road Map negotiations.

4.2 Lessons Learned

Developing Countries

The fact that the funding for developing countries has remained totally inadequate – and the profound sense of dissatisfaction in many developing countries about the governance of the funds that did materialise which led to the establishment of the Adaptation Fund under the direct authority of the Kyoto Protocol – has led to a number of developing country submissions on financing which clearly reflect the lessons learned. Key among these is the submission by the Philippines on behalf of the Group of 77 and China on the *Financial mechanism for meeting financial commitments under the Convention*⁵² of 25 August 2008 (‘the G77 proposal’).

The objective of the G77 proposal is *the operationalisation of an effective financial mechanism under the COP... to ensure the full, effective and sustained implementation of the Convention, in relation to implementation of commitments for the provision of financial resources... mandated under Articles 4.3, 4.4, 4.5, 4.8 and 4.9 of the Convention in accordance with Article 11 defining the financial mechanism.*

The proposal calls for a reform of the financial mechanism of the Convention based on the governance of the Adaptation Fund, with the following provisions concerning funding sources (emphasis added):

5. The main source of funding will be through the implementation of commitments under Article 4.3. The funding will be “new and additional” financial resources, *which is over and above ODA*. The major source of funds would be the *public sector*.
6. *Any funding pledged outside of the UNFCCC shall not be regarded as the fulfilment of commitments by developed countries under Art. 4.3 of the Convention, and their commitments for measurable, reportable and verifiable means of implementation, that is, finance, technology and capacity-building, in terms of para 1.b (ii) of the Bali Action Plan.*
7. It should be ensured that there be predictability, stability and timeliness of funding.
8. The resources shall be essentially grant-based (particularly for adaptation), without prejudice to certain concessional loan arrangements in appropriate form, to meet the needs of a specific programme.
9. The level of the new funding can be set *at 0.5% to 1% of the GNP of Annex I Parties*. Quantified commitments by developed countries to adequate and predictable funding for mitigation and adaptation must be addressed. The portion of funding that must be allocated to adaptation and mitigation and their respective means of implementation shall be decided by the Board and periodically reviewed, taking especially into account the historical imbalances in and the urgency of funding for adaptation.

The ‘Board’ mentioned in 9 refers to the governance structure put forward in the proposal (see below). The specified range of funding is based on an earlier submission⁵³ by China on the implementation of the Bali Action Plan (“the Chinese proposal”), according to which *Sufficient financing shall be provided by developed countries to address climate change. In addition to existing ODA, developed countries shall annually provide financial support of no*

*less than 0.5% of their total GDP to support actions by developing countries to address climate change in developing countries.*⁵⁴

The G77 proposal is more specific than the Chinese one. It puts an upper bound to the funding range, and identifies “developed countries” as Annex I Parties. The latter is somewhat surprising, given the way in which the relevant commitments were identified in the description of the objective of the proposal (see above): Of the articles mentioned as mandating the relevant commitments, only Art 4.3, 4.4, and 4.5 are restricted in scope, namely to “the developed country Parties and other developed Parties included in Annex II.” While it may be consistent with the letter of the Convention to interpret these commitments to apply to certain non-Annex II Parties, it would seem to be contrary to its original spirit. And it stands to reason that if one were to adopt a more encompassing interpretation, then it would not be fair to expect countries like Belarus or Turkey (non-Annex II, but Annex I) to contribute to the financial mechanism and not include countries such as South Korea, Mexico (non-Annex I, hence non-Annex II, but OECD).

The most recent⁵⁵ AWG-LCA⁵⁶ paper of relevance in this context is the *Government of India Submission on Financing Architecture for Meeting Financial Commitments*⁵⁷ (‘the Indian proposal’). While concurring with the G77 proposal, the Indian one is more specific in a number respects. With regards to funding sources, for example, it stresses that they cannot be voluntary, *because voluntary contributions are not predictable and cannot service legal commitments under the Convention. Further, the commitments under the Convention to fund the incremental costs of addressing climate change cannot be treated as aid or assistance under a donor-recipient platform [but] must be funded with resource transfers or grants.*[para 9]. The Indian proposal also amplifies the G77 assertion that any funding pledged outside of the UNFCCC shall not be regarded as the fulfilment of commitments by developed countries, since *the Convention would be undermined if parallel initiatives outside the governance structure foreseen by the Convention are considered towards fulfilment of commitments of developed country Parties under the Convention.* Under the circumstances, the proposal enumerates four types of envisaged funding sources:

- a) Annual contributions equal to 0.5% of the total GDP of the developed world for funding full agreed incremental costs of adaptation and mitigation through resource transfers or grants. Individual country contributions may be decided multilaterally on the basis of historical responsibility for GHG concentration, current emission levels, per capita GDP etc. Each developed country Party or any grouping of developed country Parties would be free to decide the means for raising these contributions through country specific or region specific auctioning of emission rights, carbon taxes, and specific levies on sectoral emissions or any other means considered feasible within their borders.
- b) Any levies on international travel or use of marine haulage that are negotiated under the Convention.
- c) Any private sources of grant funding on a voluntary basis.
- d) Any other bilateral or unilateral grant funding or contributions on a voluntary basis.

In providing this list, the Indian proposal adds specificity to that of the G77, and clarifies an important point, namely the fact that the issue at hand is public sector-type financing (resource transfers/grants/levies). This is of particular importance with regard to paragraph 6 of the G77 proposal (see above), because it means that it applies to this type of finance, and not to MRV financial support of developing country mitigation activities through private sector mechanisms like the CDM – as recently suggested by Müller and Ghosh.⁵⁸ Indeed, the Indian proposal uses the CDM as a positive example of a mechanism which *pay[s] for such*

positive incremental costs in full and thereby preserve[s] the socio-economic viability of the underlying investments despite the higher costs of mitigation.

The design and structure of the operationalisation proposed by the G77 is laid out in the following four points:

1. The COP is the supreme decision-making body of the Convention, under whose authority and guidance the mechanism will operate. The COP shall decide on the policies, programme priorities and eligibility criteria.
2. The COP will appoint a Board, which shall have an equitable and balanced representation of all Parties within a transparent and efficient system of governance. The Board shall be assisted by a Secretariat of professional staff contracted by the Board.
3. The COP and Board shall establish specialized funds, and funding windows under its governance, and a mechanism to link various funds.
4. Funds would be administered by a Trustee or Trustees selected through a process of open bidding.

Again, the Indian proposal one gives added value by providing some insight into the lessons that gave rise to that position. It recalls that under Article 11 of the Convention,⁵⁹ the intention was that its financial mechanism shall function under the guidance of, and be accountable to, the COP and have equitable and balanced representation of all Parties within a transparent system of governance. It then gives a brief account of how these provisions *were fully adhered to* in the creation of the Adaptation Fund, which *succeeded in developing an equitable and balanced representation of all parties within a transparent system of governance*” and concludes unequivocally that *anything short of [these] precedents would be a step backwards*.

To sum up: the writing is on the wall. *The time of sweetening a deal with placebo funds and (inadequate) voluntary declarations has irrevocably past.* Given the experiences that led to the establishment of the Adaptation Fund, so are the times of developing countries accepting (finance) governance structures without developing country ownership. If therefore governments wish to have a deal at Copenhagen, then they need to ensure that everyone at home understands this writing.

Europe

At the same meeting which proposed an amendment to the EU ETS Directive (See Section 1.2), the EU Parliament’s Environment Committee (ENVICom) also proposed an amendment to another Commission proposal on sharing the effort of the agreed 20%/30% reductions from 1990 levels by 2020. The ENVICom amendment introduces a new article (Article 4.a) on *Helping developing countries adapt to the negative consequences of climate change*. The Article stipulates that *upon the conclusion of an international agreement on climate change, the Community shall, as from the beginning of 2013, make a binding commitment to provide grant-based financial assistance for developing countries, ..., with the aim of supporting them in their adaptation and risk reduction.*

According to the ENVICom amendment, this assistance should be at least €5 billion in 2013, and increase linearly to at least €10 billion in 2020. It *should be channelled to EU and/or international funds for adaptation, including the Global Climate Change Alliance (GCCA) and future international funds for adaptation supported by an international agreement*. Assistance for adaptation should be **additional to current aid flows** but integrated into mainstream development aid. Finally, Member States may use the revenues

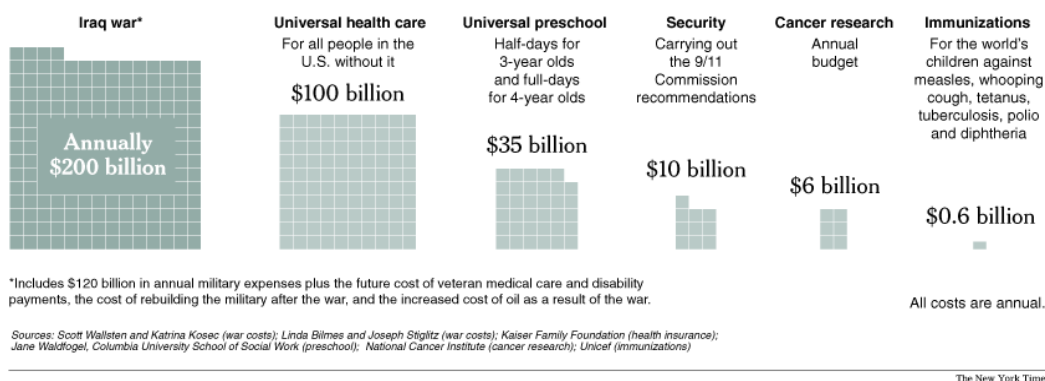
from auctioning under the implementation of Directive 2003/87/EC as amended for the purpose of meeting the obligations of this article [see Section 1.2].

Clearly, some lessons have been learned also in Europe, but it is unfortunately not self-evident that they will prevail.

4.3 The Present

In Copenhagen, *the cheque will have to be filled in*,⁶⁰ and it may be wise to take into account the expectations of developing countries in this respect. Assuming, for the moment, that ‘developed country Parties’ are those listed in (the amended) Annex II of the Convention, the Chinese proposal would currently translate into annual payments of \$66 billion from the US, and €51 billion for Annex II EU Member States (= EU15).⁶¹ The grand total for Annex II

Figure 1. *New York Times*: Putting the Annual Costs of the War in Perspective



Source: David Leonhardt (2007), “What \$1.2 Trillion Can Buy”, *New York Times*, 17 January 2007; <http://www.nytimes.com/2007/01/17/business/17leonhardt.html>

under the Chinese proposal would currently be \$167 billion, in the same order of magnitude as some recent estimates of the incremental annual investment and financial flows needed for non-Annex I mitigation and adaptation in 2030, namely between \$100 and \$140 billion *per annum*.⁶²

These are significant figures, no doubt, but they also need to be kept in perspective. In the case of the US, that would amount to about two-thirds of the estimated 2012 auction revenue under the Warner-Liebermann Bill,⁶³ or roughly three times the current ODA budget.⁶⁴ The EU figure, in turn, similarly amounts to roughly two-thirds of the estimated (2020) ETS auction revenue, or four-fifths of current total ODA expenditures. And while awe inspiring from an individual taxpayer’s perspective, it has to be kept in mind what sorts of regular expenditures are politically feasible where there is a political will. Figure 1, for example, puts the US figure of US \$66 billion into perspective with the current US expenditures on the war in Iraq and potential domestic uses. It demonstrates what is possible with sufficient political will, but it also illustrates the “domestic revenue problem”: although it was possible to spend large amounts of money out of the general budget on an “overseas cause” for a few years, the public – in this case represented by the *New York Times* – will inevitably start to ask why this money is being ‘sent abroad’ as opposed to being used for domestic good causes. This illustrates that significant budget payments abroad are unlikely to be politically sustainable, which is why it is probably unavoidable to use some “off-budget” revenue for the purpose.

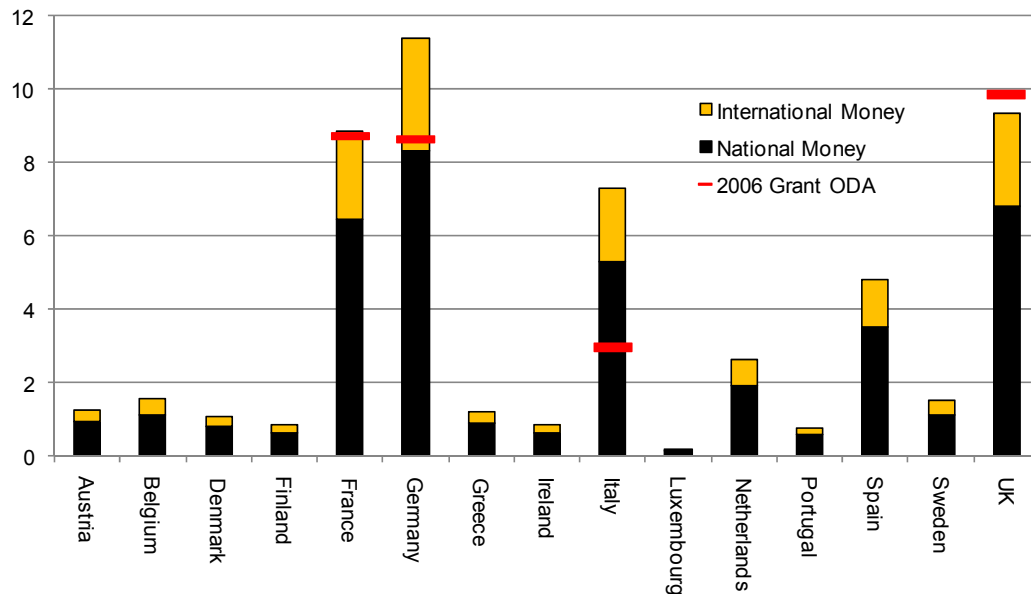
4.4 The Way Forward: How to address the ‘Three Objections’

In this final section, we return to the *Three Member State Objection* (section 1.3) to see whether the analysis given above allows us to judge their validity, and if they are, provides options to overcome them.

Objection I: Sharing the burden

If there is to be a deal in Copenhagen, there will have to be significant funding for developing countries. A key question is whether non-Annex II Parties should be expected to contribute to this effort or not. The assumption for the present purposes is that they shouldn’t, not merely because of consistency with the UNFCCC (section 4.2), but also because it would overcome Objection III (section 1.3) and thus considerably simplify the internal EU deliberations.

Figure 2: Assessed Contributions from EU15 to Developing Country Climate Change Activities
€ billion



The funding, as suggested in the Indian proposal, could be in the form of *assessed contributions* by countries or *international levies*, such as the issuance levy on international emissions trading proposed by the Norwegian government, or levies on international transport and travel, such as IATAL. The assumption here is that both will be used, and that accordingly international funding could reduce the demands on assessed national contributions.

A rather generous contribution of \$45 billion of *international money* – involving 10% international auctioning of Annex B AAUs⁶⁵ – to the overall finance effort, for example, would reduce the amount required to be raised in the EU15 to meet the minimum expectations expressed in the Chinese, Indian and G77 proposals (section 4.2) from €53 to €39 billion, or 52% of expected EU ETS 2020 auction revenue. Figure 2 shows the *assessed contributions* if the burden is shared in proportion to GDP, i.e. if it is 0.5% of the GDP for each Member State. (Note that an inclusion of the non-Annex II new Member States would hence *not* reduce the EU15 funding requirement, but simply increase the funding level by 0.5% of the GDP of the new Members.)

The Chinese proposal does not elaborate on how the lower bound figure of *0.5% of developed country GDP* was determined, and one could be inclined to see it as an opening gambit for the forthcoming negotiations. But while there may be some room for negotiation as regards the actual figure, the *order of magnitude* – tens of billions of Euros in the case of the EU – is, I believe, non-negotiable. It is therefore essential that the EU Member States – and all Annex II Parties, for that matter – come to some understanding of how they will raise assessed contributions for developing countries of these orders of magnitude.

The example illustrated in Figure 2 shows that the proposal by the EU Parliament – together with some international funding – could fulfil the expectations of developing countries with regards to the level of funding for climate change activities. The same can, unfortunately, not be said for the Commission proposal, even if *all* of the earmarked 20% were designated to developing countries. Of course, these expectations might turn out to be negotiable, but not to the degree that would match the level of developing country funding which could be expected from Commission proposal in its current form, namely €1.5 billion p.a.⁶⁶

A comparison with current grant ODA – represented by the red bars in Figure 2 – furthermore suggests two things, namely, on the one hand, that the sums involved are *not* economically crippling, but, on the other, that they are very much subject to the “domestic revenue problem” which would make it difficult to raise them through the general domestic tax budget. Governments, provided they do wish to see a global climate change deal in Copenhagen (or anywhere else) would therefore be extremely well advised ***to at least avail themselves of the possibility of earmarking ETS auction revenue*** in this context, should it prove to be impossible to raise the required funds through the national budgets.

Objection II: Subsidiarity and Competence

Again, there is an asymmetry between the two EU proposals, in that only that of the EU Parliament could be a threat to the principles governing taxation in the EU. The Commission proposal amounts to nothing but a suggestion to Member States, not a binding obligation. Given the casualties that lay slain by Member States in this much wider debate on competence and subsidiarity, it seems unlikely that Member States would be willing to establish a precedent –contrary to what they have been fighting for so long– to raise money to address climate change, let alone money to address climate change in developing countries.

Instead, in the spirit of the “art of the possible,”⁶⁷ and in keeping in mind the conclusions of the preceding section, one is probably better advised to use a compromise between the two proposals, by ***using the modality*** (‘should’) ***of the Commission with the substance of the Parliament*** (‘50% for developing countries’), in the not unreasonable hope that the EU15 Member States will realise that it is in their best interest not only to earmark auctioning revenue for this purpose, but also to agree among themselves (in Council) on a level of the suggested magnitude.

Objection III: Contrary to best practice

This leaves one remaining objection from our initial list, namely that earmarking, even at the domestic level, would be against sound fiscal practice, and in some cases even be unconstitutional. In section 3 it was shown that there are not only good theoretical arguments as to why earmarking is not necessarily bad practice, but also that it would be particularly apt for funding developing country climate change activities, because earmarked funds would be

verifiably new and additional, and much more predictable and transparent than ODA-type budgeted contributions.

Section 2, in turn, revealed an extensive practice of ‘as if earmarking’ of tax revenue, or, to be more precise, earmarking of ‘as if taxes’. In order to harness the advantages of earmarking without establishing a precedent in genuine fiscal practice, treasuries all over the world have been using the tool of *off-budget revenue raising*, particularly in the context of social security, gambling (national lotteries), and environmental degradation/compensation. Indeed, the easiest way to find out whether earmarking public revenue in general – and not just the variation imposed from outside – is unconstitutional may simply be to see whether there is a national lottery!

The Solution: “off-budget” ETS management

Indeed, one particularly relevant use of such “off budget earmarking,” namely the UK Renewables Obligation, would seem to be a template for the purpose of raising revenue for (developing country) climate change activities from EU ETS auctioning. All that needs to be done to invalidate this remaining third objection is to delegate the auctioning process at the national level to a body outside the taxation system – an “*Office for Emissions Trading*” (OfET), as it were – which operates an *off budget trust fund*, and which legitimately, and without fear of precedent for general taxation, channels earmarked revenue streams, say to the UNFCCC financial mechanism (for climate change activities in developing countries), to the private sector, and/or to treasuries, for the benefit of domestic consumers. Moreover, it stands to reason that such a system of (independent) ET regulators would need some general bottom-up coordination between the regulators, including the level of developing country funding.

Endnotes

¹ The Oxford English Dictionary

² This sub-section is based on Benito Müller, *International Adaptation Finance: The Need for an Innovative and Strategic Approach*. Oxford Institute for Energy Studies, EV 42, June 2008

³ CEC (Commission of the European Communities) 2008, Directive of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading system of the Community, COM(2008) 16 final, Brussels: 23 January 2008.

http://ec.europa.eu/environment/climat/emission/pdf/com_2008_16_en.pdf

⁴ Article 10, CEC (Commission of the European Communities) 2008a, Directive Of The European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading system of the Community, COM(2008) 16 final, Brussels: 23 January 2008.

http://ec.europa.eu/environment/climat/emission/pdf/com_2008_16_en.pdf

⁵ Para. 24 of Preamble, CEC (Commission of the European Communities) 2008a, Directive Of The European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading system of the Community, COM(2008) 16 final, Brussels: 23 January 2008.

http://ec.europa.eu/environment/climat/emission/pdf/com_2008_16_en.pdf

⁶ CEC (2008b) Impact assessment accompanying the implementation measures for the EU's objectives on climate change and renewable energy for 2020. http://ec.europa.eu/energy/climate_actions/index_en.htm:p.10. Based on an expected permit price of €40

⁷ "When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed".

⁸ "The key difficulty of Member States with the proposal was, however, the transfer of tax competence that it would have implied as the key provisions of the new tax would have been determined at EU level. So, in spite of a modified proposal by the Commission which would have introduced transitional periods for the introduction of the harmonised tax rates Amended proposal COM(95) 172, of 10.5.1995, the required unanimity could not be found in the Council. While the Commission has not formally withdrawn its proposal, its discussion remains on ice." [Manfred Rosenstock, "Energy, Taxation Policy and Green Tax Reform: Policy issues in the European Union: a viewpoint from the European Commission," UN-ECE/OECD Workshop On Enhancing the Environment by Reforming Energy Prices, Průhonice near Prague, Czech Republic, 14 to 16 June 2000.]

⁹ Susannah Camic (2006), "Earmarking: The Potential Benefits, Pittsburgh Tax Review, Vol.4, 2006:p.60f.

¹⁰ US EPA (2008a), CERCLA Overview, <http://www.epa.gov/superfund/policy/cercla.htm>, (Accessed 27 October 2008).

¹¹ US EPA (2008a), CERCLA Overview, <http://www.epa.gov/superfund/policy/cercla.htm>, (Accessed 27 October 2008)

¹² US EPA (2008b), "Superfund National Accomplishments Summary Fiscal Year 2007",

<http://www.epa.gov/superfund/accomp/numbers07.htm> (Accessed 30 Oct. 2008)

¹³ This sub-section is based on Benito Müller, *International Adaptation Finance: The Need for an Innovative and Strategic Approach*. Oxford Institute for Energy Studies, EV 42, June 2008

¹⁴ See <http://www.pewclimate.org/analysis/l-w>

¹⁵ Section 1344 (b)(1)

¹⁶ Section 1344 (b)(5)

¹⁷ The one possible condition which could create a problem for the AF to receive funding from this source is *more than 10 percent of the amounts available to the fund be spent in any single country in any year* [Section 1345(i)(4)].

¹⁸ Social Security Act 1975.

¹⁹ See, for example, National Audit Office (2008), *National Insurance Fund Account 2006-2007*, 1 APRIL 2008.

²⁰ "The total sales figure for the half year to 27 September, 2008 was a mind-boggling £2,559 million." ["EuroMillions Boosts Sales," <http://www.euro-millions.com/news/euromillions-boosts-sales.asp>]

²¹ Austria, Belgium, France, Ireland, Luxembourg, Portugal Spain, Switzerland, and UK.

²² "EuroMillions Boosts Sales," <http://www.euro-millions.com/news/euromillions-boosts-sales.asp>

²³ For an analysis of the RO, see, for example, C. Mitchell, D. Bauknecht, and P.M. Connor (2006),

"Effectiveness through risk reduction: a comparison of the renewable obligation in England and Wales and the feed-in system in Germany", *Energy Policy*, Volume 34, Issue 3, February 2006, Pages 297-305

²⁴ Starting from 3% in 2002/03, rising to 10.4% by 2010/11, and 15.4% by 2015/16.

- ²⁵ Mitchell (2006): “3. The England and Wales RO—how it works”.
- ²⁶ “This is the re-distribution to suppliers of monies collected by Ofgem from the payment of the buy-out price. The monies are re-cycled to suppliers on the basis of the volume of ROCs they presented to Ofgem as a fraction of all the ROCs presented to Ofgem in the specified period. For example, if a supplier presents 5% of all the ROCs presented in a 1-year period, then that supplier would receive 5% of the buy-out fund for that period.”[Mitchell (2006): “3. The England and Wales RO—how it works”.]
- ²⁷ HMG, *Explanatory notes of the Energy Bill 2008*
- ²⁸ “In addition, the buy-out price is the cap on expenditure of the RO each year. It ensures that customers do not pay more than an additional 3 p/kWh for a maximum of 10% of electricity. This is a vital part of England and Wales strategy. Without a price cap (and hence a cost limit to the customer), it is unlikely that the Department of Trade and Industry could have got agreement for the RO from the Treasury.”.[Mitchell (2006): “3. The England and Wales RO—how it works”.]
- ²⁹ Camic (2006):p.57.
- ³⁰ McCleary (1991):84
- ³¹ McCleary (1991):86
- ³² “But if one drops the notion of a single will and recognizes that political processes are imperfect and that societies consist of many groups with differing preferences, benefit taxation and earmarking may take on a more favorable coloring as a means of accommodating differences at a point in time and over time. (In fact, if voters have identical preferences or if the same group of voters had the median preferences with respect to both how funds are spent and the level of taxes—that is, the size of the budget—then the end results of financing from general funds and earmarking are the same.)”[McCleary (1991):86]
- ³³ McCleary (1991):81.
- ³⁴ McCleary (1991):81.
- ³⁵ McCleary (1991):85.
- ³⁶ McCleary (1991):100.
- Camic (2006):p.56.
- ³⁸ Camic (2006):p.56.
- ³⁹ Camic (2006):p.56.
- ⁴⁰ Eric M. Patashnik (2000), *Putting Trust in the US Budget: Federal Trust Funds and the Politics of Commitment*, Cambridge: Cambridge University Press, ISBN 0521777488, 9780521777483
- ⁴¹ *Black’s Law Dictionary* 573 (8th ed. 2004)
- ⁴² Camic (2006):p.65.
- ⁴³ Camic (2006):p.83.
- ⁴⁴ “[V]alorization deserves a favorable rating. Its popularity and its ability to raise revenue justify its continuation and extension.”[McCleary (1991):94]
- ⁴⁵ “Quite simply, allowing levels of spending in these cases to be driven solely by the level of earmarked revenue would lead to a misallocation of resources.”[McCleary (1991):p.89]
- ⁴⁶ ENB, Vol. 12, No 176, 30 July 2001
- ⁴⁷ M.J. Mace (2005), “Funding for Adaptation to Climate Change: UNFCCC and GEF Developments since COP-7” *RECIEL* 14 (3) 2005. ISSN 0962 8797:230.
- ⁴⁸ ENB, “A Brief Analysis of COP-6 Part II: Finance”, Vol. 12, No 176, 30 July 2001. Emphasis added.
- ⁴⁹ Decisions 7/CP.7 and 10/CP.7
- ⁵⁰ UNFCCC (2001), “Implementation of the Buenos Aires Plan of Action, Statements made in Connection with the Approval of the Bonn Agreements on the Implementation of the Buenos Aires Plan of Action (Decision 5/CP.6),” FCCC/CP/2001/ MISC.4, 23 October 2001: 6–7.
- ⁵¹ M.J. Mace (2005), “Funding for Adaptation to Climate Change: UNFCCC and GEF Developments since COP-7” *RECIEL* 14 (3) 2005. ISSN 0962 8797:p.230 (Footnote 53).
- ⁵² UNFCCC, *Ideas and proposals on the elements contained in paragraph 1 of the Bali Action Plan: Submissions from Parties*, FCCC/AWGLCA/2008/MISC.2/Add.1.
- ⁵³ 22 February 2008.
- ⁵⁴ UNFCCC (2008): Views regarding the work programme of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention. FCCC/AWGLCA/2008/MISC.1:p.19
- ⁵⁵ 17 October 2008.
- ⁵⁶ Ad Hoc Working Group on Long-term Cooperative Action under the Convention
- ⁵⁷ http://unfccc.int/files/kyoto_protocol/application/pdf/indiafinancialarchitecture171008.pdf (Slightly odd filing of a submission to the AWG/LCA)

⁵⁸ Benito Müller and Prodipto Ghosh, *Implementing the Bali Action Plan: What role for the CDM?*, Oxford Institute for Energy Studies, *Energy and Environment Comment*, October 2008, available at www.OxfordClimatePolicy.org

⁵⁹ Article 11.

⁶⁰ See Section 4.1.

⁶¹ These figures are based on (a) GDP figures for 2006 from the World Bank 2008 *World Development Indicators*, (b) An exchange rate of \$1 = €0.79.

⁶² Erik Haites, *Negotiations on additional investment and financial flows to address climate change in developing countries*, An Environment & Energy Group publication, UNDP, July 2008; <http://www.undp.org/climatechange/documents.html>. Haites estimates for non-Annex I costs are \$70-3 billion for mitigation, and \$28-\$67 billion for adaptation.

⁶³ See Section 2.1.

⁶⁴ Based on the fact that 2007 DAC ODA of \$104bn (EU: 59%, US: 23%). Source: OECD DAC. Development Aid in 2007 tables and graphs, 4 April 2008, http://www.oecd.org/statisticsdata/0,3381,en_2649_33721_1_119656_1_1_1,00.html

⁶⁵ The assumption being that total international finance would be given by: IET-AA Levy (10%-levy): \$33bn [extrapolated from Haites (2008) 2% levy, p.31]; International Air Travel Adaptation Levy (IATAL), \$5bn (50% of est. max.); International Maritime Emissions Reduction Scheme (IMERS): \$7.5bn; (50% of est. max.), and that this total would be shared out in proportion to Annex II GDP.

⁶⁶ See Benito Müller, *International Adaptation Finance: The Need for an Innovative and Strategic Approach*. Oxford Institute for Energy Studies, EV 42, June 2008.

⁶⁷ "Politics is the art of the possible." Otto Von Bismarck, 11 August 1867.