# New Sources of Development Financing: The Case for a Green Tax

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August 2005

Financing for development is evidently a key issue in the global response to the challenge of meeting the Millennium Development Goals (MDGs). It is a tough challenge to raise additional revenues to fight global poverty and foster all-sided development. Notwithstanding recent initiatives for significant debt relief for the poorest heavily indebted countries and some trade concessions to developing countries, much still has to be done to generate enough resources for development and anti-poverty spending.

In recognition of this great challenge to mobilize resources, the international community has encouraged the promotion of new, innovative sources of financing. Multilateral institutions, nation-states, and civil society organizations have all contributed ideas and inputs to give flesh to innovative sources of finance.

One instrument is global environmental taxation. A green tax, or user charge, makes economic sense not only in collecting additional revenues but also in addressing market failure and negative externality. At the same time, it is technically defensible and politically feasible. Numerous studies have been done on the design of different types of green taxes or users charges. Governments in various continents have likewise endorsed, if not introduced, green taxation at the national and supra-national levels. That said, the more substantive issues relating to a green tax revolves around the following: 1) the framework and objectives, 2) the tax design, and 3) the institutional arrangements.

## Framework

As in any policy formulation, the framework and objectives of a tax measure have to be clear and explicit. Drawing from the basic principles of fiscal policy, a paper from Paul and Wahlberg (2002) elaborates on a framework for a global tax. The elements comprising the framework include the "policy-steering effects," the revenue potential and the use of revenues, the redistribution goal, and the efficiency or ease of implementation.

The intended effect, in the case of an environmental tax (say, a carbon tax) is to reduce carbon dioxide emissions. The reduction of emissions, in turn, slows down the harmful effects of global warming. Taxing or putting a price to carbon emissions is an appropriate measure to address a worldwide negative externality, which is global warming. Global warming does not have borders. The gas emissions from the United States (US) affect not only the American people but all peoples of the world.

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It must likewise be clear what the tax's primary policy objective of is. If the primary concern is the environment, then the price should reflect the actual cost of reducing emissions. It can be tempting, for instance, to have a lower rate that is misaligned to the actual cost, if the overriding objective is generating revenues.

The revenue potential from global environmental regulation is huge. Stiglitz (2005), for instance, says that "at current carbon prices, the value of carbon sequestration by tropical rainforests likely equals or exceeds the current level of international aid being provided to developing countries."

The amount to be raised from green taxes or measures can be spent in various ways—e.g., for the environment or for poverty reduction. It may make more sense to use the revenues from environmental measures to protect the environment. It does not hurt anti-poverty spending; the revenues from green measures in fact free up resources that can be now allocated for anti-poverty or other development programs. This is an example of how a green tax results in a double dividend.

Redistribution or progressivity of green taxes has several aspects—say, higher tax rates for the rich countries and lower rates for the poor countries. Having different rates however requires greater administrative capacity.

Another example is to have a separate redistribution mechanism. A portion of the revenues can be allocated to supporting the poor, or providing safety nets to poor households and producers (e.g., small farmers) who also have to shoulder part of the tax burden. A uniform tax rate with a separate distributional system (as against several tax rates based on the income level of the countries) is the most appealing for its relative ease of enforcement.

## Design

Two approaches, using economic incentives, have dominated the policy discourse on how to reduce pollution or carbon dioxide emissions, which can be applied at different levels: local, national, regional and global

The first approach is to set a price on emissions.[2] A tax on emissions would affect the behavior of firms and households. They would be expected to limit the use of fossil fuels or to substitute fossil fuels of high carbon content with those with lower carbon content.

The setting of the price, or the tax, is based on the cost of individual emission reductions at an upper limit. Theoretically, the price per carbon ton is set equal

[2] The paper focuses on the taxation of carbon emissions, which so far has been the most developed proposal. The increase in carbon dioxide emissions is a major reason for the rise in global warming.

to the expected benefits resulting from reducing a ton of carbon emission. The constraint though is the lack of accurate information regarding the estimation of costs and benefits to achieve different levels of emission reduction. By itself, too, the pricing of emissions does not provide for meeting a particular emission-reduction target.

The second approach is to have a cap on emissions; it is also called a cap-and-trade system. In this approach, an overall limit on the level of emissions is agreed upon, and incentives are given to countries whose current emissions are below the prescribed limits. Countries are given emission allowances that are tradable. The surplus from the allowances (the unused amount below the prescribed limit) enjoyed by energy-efficient countries can be traded at a profit with other countries that incur higher costs in reducing emissions or have difficulty meeting their reduction targets. Everyone is better off from the trade.

Sandmo (2003) argues that price setting (or an emission tax) and quantitative regulation in the form of transferable quotas have equivalent outcomes in terms of production efficiency and revenue impact. The other view, given the lack of information on the true cost of limiting emissions, the advantage of the price instrument over a strict cap is that the former has the flexibility for adjustments in case a wrong level of control was chosen.

Always a challenge in dealing with taxation for a global good is how to ensure that everyone cooperates and abides by the rules. A basic assumption is that nation-states agree to collective action. But there's the rub—nation-states can exploit the free-rider situation, thus weakening the tax's potential gains.

The European Union (EU) has shown the way in implementing the cap-and-trade system. The EU describes its emissions trading scheme (ETS) as a "global innovation to combat climate change." The implementation of the ETS covers different phases. For the initial stage, the scheme is limited to carbon dioxide emissions of the big industries. Decisions on allocation of emission allowances are done periodically. Moreover, the scheme has a strong compliance framework.

The EU member states have found the ETS as a cost-effective way to meet their commitments to the Kyoto Protocol. The estimate of ETS costs to meet the Kyoto Protocol target is between 2.8 and 3.7 billion euros yearly. Without the ETS, the Kyoto Protocol compliance costs would shoot up to 6.8 billion euros annually.

The ETS (or for that matter other carbon emission markets like the voluntary United Kingdom Emissions Trading Scheme and the self-regulatory multinational and multisectoral Chicago Climate Exchange), though remotely linked to financing MDGs, can be duplicated in developing countries in a way that will generate revenues for development.

## Innovation in Developing Countries

A worthy project initiated by the Coalition for Rainforest Nations[3] is the advocacy to correct the exclusion from the Kyoto Protocol of carbon trading for the purpose of avoiding deforestation.

Forest degradation in developing countries significantly contributes to the accumulation of greenhouse gases. Yet, the Kyoto Protocol does not provide incentives for highly deforested countries to regulate emissions arising from deforestation. The irony is best explained by the Rainforest Coalition in its website:

"Developing Nations, while bearing the principle economic burden of preserving the Rainforests, have been purposefully barred from utilizing the growing carbon emissions markets toward this critical objective.

"Conversely, Industrialized Nations largely deforested during previous generations, have structured the Kyoto Accord to effectively credit themselves for past errors by planting trees primarily within their collective borders.

"In effect, the Industrialized Nations compensate themselves to replant while asking Developing Nations to conserve the remaining Rainforests for free."

The Rainforest Coalition is thus advocating the inclusion of carbon sequestration and emissions resulting from deforestation in the Kyoto Protocol's carbon emission trade.

This advocacy runs parallel to a "novel concept" by Santilli et al (2005) called "compensated reduction." The gist of this concept, to quote the authors, is that "countries that elect to reduce national level deforestation to below a previously determined historical level would receive post facto compensation."

And in Stiglitz's words: "Compensating the developing countries for providing these environmental services would be one way of substantially increasing aid and at the same time, providing these countries with the right market incentives."

## Institutional Arrangements

The Kyoto Protocol should have provided a coherent, unifying framework for the international community to advance a green tax. Yet, the biggest obstacle to the enforcement of the Protocol is the refusal of the US, which is the world's biggest greenhouse gas emitter, to ratify it.

[3]The core of the Rainforest Coalition is made up of countries that are rich in tropical rainforest resources: Bolivia, Central African Republic, Chile, Democratic Republic of Congo, Congo, Costa Rica, Dominican Republic, Nicaragua, and Papua New Guinea.

The truth is, at this time, international institutions remain weak—they lack accountability and are incapable of enforcing the rules without exception. US unilateralism, too, creates a moral hazard. One country that does not follow the rules gives other countries the excuse to follow suit. It will thus take a long, hard process to build effective global institutions.

For strategic purposes, the building blocks for an international political authority for taxation (or what others call a world tax authority) have to be seriously considered. Indeed, there is a range of taxes and user charges that can be imposed to protect the global commons and promote global public goods. Key issues that have to be fleshed out include representation, accountability, monitoring of global commons, determination of rules of access and issue permits, scope of enforcement, criteria for allocation and distribution of revenues, etc.

In the absence of such a global body, the intermediate option is to forge the cooperation of nation-states through a treaty, for example. For this to gain broad-based support, the tax objectives and design should result in a gain for all countries. The principle of subsidiarity can encourage sovereign states to get on board. Specifically, even as tax liability is determined multilaterally, national governments exercise the freedom to choose how taxes will be raised and implemented (Atkinson 2003).

Taking into consideration the reality that the global institutions and rules for a universal green tax are still immature, we must emphasize how national initiatives can still contribute to the global effort.

In the highly developed countries, particular attention has to be given to the US, which by itself already emits a fifth of the world's greenhouse gases (estimate for 1997).

In the US, despite the aversion of the George W. Bush administration to taxes in general and its opposition to green taxes in particular, "windows of opportunity" have opened in light of the chronic budget deficit and the proposal to put in place a revenue-neutral federal tax reform package (Hanson 2005). To be sure, the introduction of environmental taxes as well as the removal of fiscal incentives to the production of environmentally harmful goods will shoot two birds with one stone. That is, help reduce the deficit and protect the environment.

A well-thought-out strategy for green taxes in the US can even make good politics and gain popular support. Pollution taxes can be part of a revenue-neutral tax reform policy. The taxes on pollution can substitute for a reduction of payroll or marginal income tax rates. But given the seriousness of the US deficit, even a non-revenue neutral approach—that is, gaining additional revenues from environmental taxation—can be pursued.

In developing countries, too, the case is strong to introduce environmental taxes. Many developing countries are deficit-ridden, and their revenue efforts have declined (with trade liberalization marked by significant tariff cuts abetting the problem). Surely, environmental taxes will help boost revenues. It must also be said that different tax systems (such as income tax, property tax, or excise tax) can include green objectives.

Moreover, environmental taxes such as excise taxes on petroleum, private motor vehicles, and air travel will turn out to be progressive and equitable since the main users of such goods and services are the upper income classes.

Indeed, both for developed and developing countries, green taxation results in a double dividend. And let us not forget another dividend in the form of generating additional resources to finance worldwide development (Sandmo 2003).

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