The need for additional sources of funding

There is an urgent need for a global network of terrestrial protected areas (PAs), especially for ancient (or primary) forest ecosystems. Ancient forests are under multiple threats, predominantly commercial and illegal logging and agriculture.

The funding gap for a global network of PAs has an estimated at shortfall of US$ 20-25 billion per year for terrestrial ecosystems (Balmford et al., 2002). This amount, however, is negligible in comparison to the estimated financial returns of between US$ 4 400-5 200 billion per year that a global network of PAs could provide in terms of ecosystem goods and services, such as clean water, food security, medicine, disaster prevention and climate stabilisation.

Greenpeace commissioned a review[1] of options to generate additional funds for a global network of terrestrial PAs. From these options, Greenpeace considers international environmental taxation options to be the most suitable mechanism to fill the funding gap for a global network of terrestrial PAs, in particular forests.

International environmental taxation mechanisms

Biodiversity is not evenly distributed around the world but generally concentrated in the tropics. However, a number of important goods and services produced by biodiversity via ecosystems are regional or global, e.g. carbon sequestration in forests. Therefore, the global community has an obligation to fund PAs. This is most easily performed by international fund-raising mechanisms. International mechanisms are especially relevant for poorer countries, which may be biodiversity-rich, yet require financial assistance to develop an effective network of PAs.

There are many options for increased funding, but environmental taxation is Greenpeace's preferred mechanism to raise additional funds for PAs. International environmental taxation is attractive because it would capture taxes from transnational companies/corporations. Transnational companies are becoming increasingly insulated from national taxation systems, but can exploit natural resources on a large scale, with associated negative ecological and social impacts. Thus, an international environmental tax would help to internalise the costs of these negative impacts.

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[1] Verweij, P.A. & M. de Man, 2005. We cannot afford more biodiversity loss: the urgency of protected area financing. Report, Greenpeace International, Amsterdam, 69 pp.
Available at: http://www.greenpeace.org/protected-areas-financing

International environmental taxation would have the additional benefit of increasing the accountability of transnational companies at the international level.

The taxation subjects described here were selected on the basis of being applicable globally and able to be administered through international agencies. The following types of tax have the most potential to raise income for a global network of PAs.

1) Carbon tax
2) Timber tax
3) Currency Transaction Tax

1) Carbon taxes

Carbon tax would be applied to releases of carbon dioxide from fossil fuels into the atmosphere. Carbon taxes could raise money for a variety of relevant projects, including the promotion of renewable energy, but could also raise money for protected areas. Biodiversity conservation is key to maintaining healthy ecosystems and contributing to mitigation and adaptation to climate change. In particular, the conservation of forest and peat ecosystems would prevent the loss of terrestrial sinks and stocks of carbon, which is a function man-made ecosystems cannot fulfil to the same extent.

Aviation and shipping: These sectors contribute significantly to air pollution and climate change, but their emissions are not covered by the Kyoto Protocol. The substantial greenhouse gas emissions from the growth of both sectors make these important areas for a potential carbon tax scheme. Taxes to offset carbon emissions from air travel and shipping could raise considerable revenues, of which a proportion could be for PAs, including forests and peat ecosystems.

Taxes related to aviation could be applied on consumed fuel, air tickets, or on the use of air corridors. The air corridor option has the advantage that the tax can be collected by air space administration bodies on top of the normal route fees. The aircraft's emissions could also be taken into account along with the amount of fuel consumed. Thus, the tax rate could be linked to the level of pollution and greenhouse gas emissions, which may lead to reductions of the emissions generated by the aviation sector by technological innovations. The aviation tax options each have the potential to yield US$ 8-10 x 10^9 per year and would result in modest increases in the price of air tickets (Landau, 2004).

In the shipping sector, taxes could be applied to fuels, and on utilization of sea straits. The fuel tax would raise US$ 1-20 x 10^9 per year, depending on the degree to which environmental costs are internalized in the fuel cost price (Landau, 2004). A fuel tax has the most direct relation with the negative environmental impacts caused by shipping and thus could lead to mitigation of pollution and greenhouse gas emissions.

Revenues from taxes on aviation and shipping would probably be divided between PAs and other initiatives such as developing cleaner transport systems or poverty alleviation. Nonetheless, aviation and shipping taxes would be a viable option to raise additional funds for protected areas.

The Landau Report (Landau, 2004) concludes that environmental taxes on aviation and shipping are technically feasible and that these would be able to raise significant, stable and sustainable sources of finance. The critical issue is that these require strong international consensus.

2) Timber tax

The annual turnover of world trade in forest products exceeded US$ 200 x 10^9 in 2003 (FAOSTAT, 2005). A tax of 1% on international trade in timber products (including paper) thus would generate revenue of US$ 2 x 10^9. Whilst a regulative system for international timber trade could raise only a part of the revenues required for a global network of protected areas, the advantage is that this could be channelled directly into forest PAs.

A suggested mechanism for channelling international payments linked to timber trade taxation is to make area-based payments to forest management units to compensate for the additional costs of sustainable natural forest management (Bach & Gram, 1996). However, this clearly could be considered a forestry subsidy. Only at very low extraction levels, or in the case of sustainable use of non-timber forest products, it can be justified that area-based payments would act as financial compensation for ecosystem services provided by natural forests. Financial compensation would then take the form of payment for environmental services.

A lower timber taxation rates could be applied to Forest Stewardship Council (FSC) certified wood products, in order to provide financial incentives for the use of timber from sustainable forestry operations.

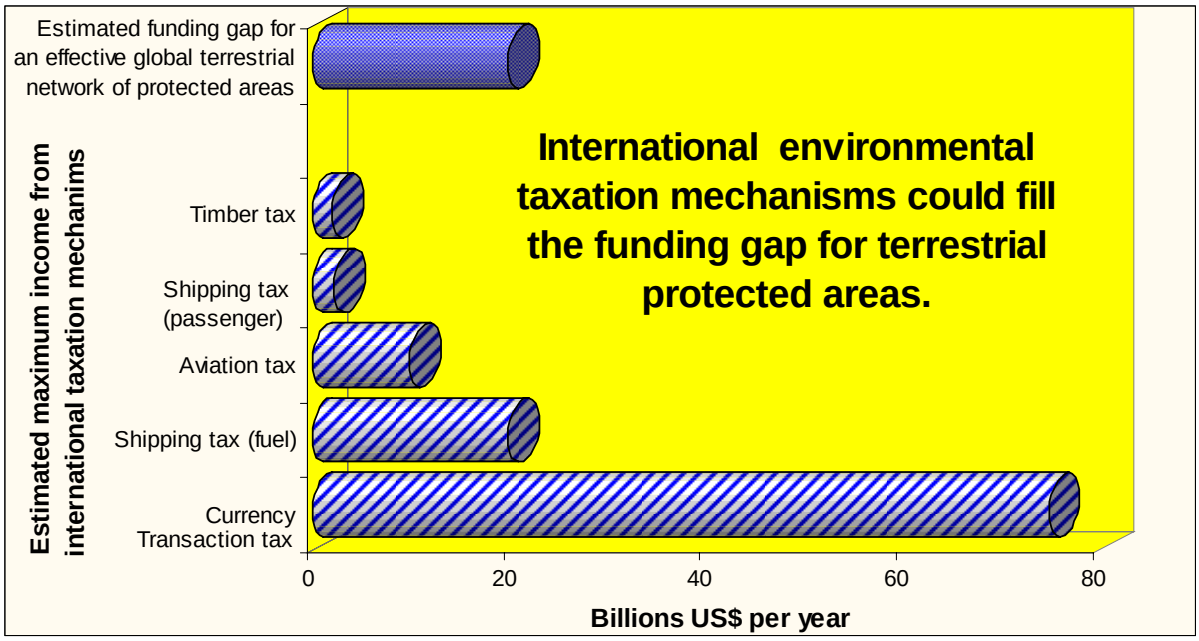
An international body such as UN GEF could be in charge of co-ordinating the distribution of revenues of a timber tax. Payment for environmental services and conservation trust funds are identified as important distribution mechanisms to spend the money on forest conservation.

3) Currency Transaction Tax

Funds could be raised via a tax levied on currency or exchange transactions. Both the Rapport Quadripartite (2004) and the Landau report (Landau, 2004) conclude that a tax on foreign exchange transactions is technically feasible. Although not an environmental tax, such a tax has considerable potential for raising funds for sustainable development, including biodiversity conservation in the form of PAs. A modified Tobin tax of 0.01% on foreign exchange transactions would yield about US$ 47.5 x 10^9 per annum. A two-tier Currency Transaction Tax would generate US$ 60-75 x 10^9 at global level, but could also be introduced at regional or unilateral level.

If applied at global or regional level, a tax on international financial transactions requires international co-ordination of the mechanism and a proper institutional framework. Who decides on the destination of the financial resources generated? However, if part of the revenues would be spent towards benefiting the environment, this money could be allocated to existing international agencies, in particular UN GEF.

Summary



It is clear (see Fig.) that international environmental taxes do have potential to fill the funding shortfall. Indeed, the Currency Transaction Tax has potential to close the gap completely although, in practice, the money raised would be unlikely to all be directed towards terrestrial protected areas. However, a combination of these taxes could be effective in providing the necessary funding, especially to developing countries where the funding shortfall for protected areas is most acute. Importantly, political will is required to set up new international taxation regimes.

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