WORKING PAPER / 2009.07

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A US-Indonesian case study

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of the Thematic Group Impact of Globalisation.

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December 2009

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ABSTRACT

The vital role of forests in limiting the likelihood of dangerous climate change has precipitated renewed interest in debt-for-nature swaps. This article uses evidence on past debt-for-nature swaps and similar debt mechanisms to assess the recent second wave of debt swaps. It outlines five typical shortcomings of this form of financial transaction: that they often fail to deliver additional resources to the debtor country; often fail to deliver more resources for conservation/climate purposes; often have a negligible effect on overall debt burdens, and, as such, do not generate more 'indirect' benefits; and are often in conflict with the new aid delivery paradigm's emphasis on alignment with government policy and systems. Our analysis is applied to a recent debt-for-nature swap initiative between the United States and Indonesia. We show that this case, which we consider as a litmus test for current swap practice, performs unevenly across the five shortcomings identified. On the one hand, the swap does not create *additional* resources for the Government of Indonesia, is too insignificant to create indirect (positive) economic effects, and appears at odds with the new aid delivery paradigm's insistence on system alignment. On the other hand, the swap does not *reduce* Government of Indonesia resources, and is very much in line with current national policy. The extent to which the resources provided by the swap are additional to other donor support and reserved domestic budget lines for conservation goals is unclear. Whilst a second generation of debt-for-nature swaps should clearly be avoided, there is a need to debate broader ways of linking debt service repayments to forest conservation.

ACKNOWLEDGEMENTS

Helpful comments from Robrecht Renard (University of Antwerp, IOB) are gratefully acknowledged.

1. INTRODUCTION

Forest ecosystems play a vital dual function in limiting the likelihood of dangerous climatic change. On the one hand, they act as carbon sinks which store twice the amount of carbon present in the atmosphere. On the other hand, each year they actively remove up to one third of all carbon dioxide emissions from fossil fuel combustion and land use change (McMullen and Jabbour, 2009). Forests' vital role in maintaining the globe's carbon cycle can be supported in a number of ways. For example, through reforestation initiatives, by increasing the amount of carbon stored and sequestered per hectare (in other words, increasing a forest's carbon density), and through utilising sustainably-harvested forest products in place of items with a large carbon footprint (e.g. using timber instead of concrete for house construction) (McMullen and Jabbour, 2009). Most importantly, forests' vital role can be supported through reducing deforestation (see e.g. Rudel, 2001). Estimates suggest that around one fifth of global greenhouse gas emissions stem from tropical deforestation (see IPCC, 2007), concentrated particularly in Indonesia and Brazil (see Porrúra et al., 2007). Moreover, it is important to remember that forests are more than just the carbon they store and sequester. They are integral to the globe's hydrological cycle, and house the greatest concentration of biodiversity (see Obereke and Dooley, 2009).

Despite the centrality of forest ecosystems in the global carbon cycle, until recently forests have been excluded from agreements under the United Nations Framework Convention on Climate Change (UNFCCC). There have been two inter-related main reasons for this: first, a lack of sufficient precision and scientific agreement on measuring carbon sequestration in land use, land-use change and forestry; and second, that mitigation interventions within the forestry (or agricultural) sectors are highly dependent on the local environmental context (as the amount of carbon sequestered in the soil depends on climatic zone, local climatic condition, characteristics of the soil, type of vegetation, and cultivation or harvesting practices – see Muller, 2009). As progress has been made on both these fronts, and the need for mitigation has become all the more pressing, recent years have seen a vibrant debate on how to integrate REDD-plus (in other words, reduced emissions from deforestation and forest degradation, and the conservation and sustainable management of existing forest carbon stocks) into a global climate regime (see e.g. Angelsen et al., 2009; Ebeling and Yasue, 2008; Karsenty, 2008; and Neeff and Ascui, 2009). For example, the 15th Conference of Parties of the UNFCCC saw calls for the 'immediate establishment' of a mechanism to reduce emission from deforestation and forest degradation (including REDD-plus) as part of the Copenhagen Accord (UNFCCC, 2009a). In addition, the Working Group on Long-term Cooperative Action under the Convention outlined the steps developing countries will be assisted with to make a REDD-plus mechanism operational, including: the identification of the drivers of deforestation; and estimating the levels of forest carbon emissions and sinks through a combination of remote sensing and ground-based measurement (UNFCCC, 2009b).

However, how to finance reduced emissions from deforestation and degradation is still a matter of debate. Recent estimates suggest that preparing and implementing REDD to ensure a 50% reduction in forest emissions will be between US$15 and 35 billion per year (Angelsen et al., 2009). The extent to which these funds will be generated from existing multilateral climate funds (such as the Global Environment Facilities' Trust Fund or the World Bank's Strategic Climate Fund), current market-based schemes (such as the Clean Development Mechanism under the Kyoto Protocol, or the European Emission Union Trading

Scheme) or innovative climate finance channels (such as a levy on emissions from international shipping and aviation, or the international or domestic auction of a proportion of assigned amount units) is yet to be finalised. For example, the Copenhagen Accord only states that countries 'decide to pursue various approaches, including opportunities to use markets, to enhance the cost-effectiveness of, and to promote mitigation actions' (UNFCCC, 2009a). In this respect, it is as yet uncertain whether funding for REDD will take the 'polluter pays principle' fully into account and ensure that developed countries contributions will be pursuant with cumulative, per capita emissions. To be sure, as climate change mitigation (through REDD or other strategies) is clearly a global public good, it would seem fair that developed countries shoulder a larger part of the costs involved than when purely national benefits (for example in the education or health sector of developing countries) would be generated.

This continuous search for innovative financing mechanisms has also renewed interest in debt-for-nature swaps (now framed as much in terms of carbon storage as protecting biodiversity). Indeed, debt swaps were part of the negotiating text for the Copenhagen summit. Although absent from previous UNFCCC finance documents, Indonesia inserted 'external debt swap/relief' as a source of finance during the UNFCCC's informal consultations in Bonn in August, 2009 (see UNFCCC, 2009c:157). In such swaps a non-governmental organisation (NGO) purchases (commercial) developing country debt on the secondary market at a discount from the face value of the debt title. The NGO redeems the acquired title with the debtor country in exchange for a domestic currency instrument used to finance environmental and conservation expenditures by local partners (normally receiving a redemption price closer to face value than the secondary market price) (see Hansen, 1989; Jha and Schatan, 2001; Sheikh, 2008).

Different variations on this swap procedure exist. Current transactions are often conducted directly between a creditor and a debtor government (thus involving public debt), usually with assistance from an international NGO.[1] On the 30th June 2009, such a bilateral deal was signed between the United States and Indonesia, swapping nearly US$ 30 million of Indonesian government debt owed to the United States over the next eight years against Indonesia's commitment to spend this sum on NGO projects benefiting Sumatra's tropical forests. Both Conservational International and an Indonesian environmental foundation helped broker the deal (see USAID, 2009a; Huff, 2009).

Debt conversions have been seen as 'win-win-win' transactions (Gugler, 1997), being advantageous to all parties involved (see e.g. Moye, 2001).[2] From this perspective,

[1] For example, The Nature Conservancy, the World Wildlife Fund, and Conservation International have all been recently involved in such transactions.

[2] Some arguments in support of debt-for-nature swaps resemble those in the literature on environmental taxation concerning the 'double dividend hypothesis'. Here, environmental taxes are seen as an efficient instrument to protect the environment by, firstly, discouraging environmentally degrading activities such as, say, mining or deforestation. Secondly, tax revenues can be used to finance projects to the benefit of the environment or to cut other, possibly distortionary taxes. As such, by introducing an environmental tax, the government may reap a 'double dividend' (see e.g. Goulder, 1995 and Bovenberg, 1999 for a more detailed account). In analogy, advocates of debt-for-nature swaps have argued that these swap arrangements, by relieving countries from their foreign exchange (debt service) obligations, help to preserve the environment as the demand for natural resource extraction diminishes, while at the same time mobilising additional funds which can be utilised for beneficial environmental or fiscal purposes. The link between hard currency denoted debt reduction and lower extraction rates is however contested (see e.g. Didia, 2001 versus Khan and McDonald, 1995).

debtor countries reduce their debt burden, save scarce hard currency, and free up budgetary resources for environmental (or other) spending. Environmental groups leverage their funds because of a positive difference between the redemption value and the secondary market value of the debt purchased or received, raise their profile and expand their network. Creditors, usually developed country governments or private banks, will see an increase in the value of any remaining debt claims and improve their environmental credentials (Occhiolini, 1990; Dogsé and von Droste, 1990). It is, however, far from certain that many of the foregoing benefits materialise in practice. For example, does the US-Indonesian swap deal necessarily imply that Indonesia will see its available resources increase by US$ 30 million, or that an extra US$ 30 million will be spent on environmental purposes?

This article uses evidence on past debt-for-nature swaps and similar debt swap initiatives to assess the pitfalls and potential of such financial instruments. The analysis is applied to a recent debt swap between the United States and Indonesia. There are four reasons why we focus on this swap and consider it as a litmus test for assessing the efficacy of current debt-for-nature swaps. First, this is the largest debt swap yet conducted under the Tropical Forest Conservation Act (TFCA), a key piece of legislation designed to facilitate public debt swaps to conserve Tropical Forests. Second, on the creditor side, the United States, through the TFCA, is the main exponent of debt-for-nature swaps. Third, on the debtor side, and under the guidance of Finance Minister Sri Mulyani Indrawati, Indonesia is promoting debt swaps and debt relief as a form of climate finance. And fourth, regarding the broker role, Conservation International has been at the forefront of promoting and conducting debt-for-nature swaps over the past two decades.

The article is structured as follows. Section 2 offers a concise history of debt swaps and provides details of the case under review. Section 3 discusses two direct benefits that debt-for-nature swaps should provide. First, on a recipient country level, they should lead to an increase in available resources. Second, on a global level, they should generate extra funding for conservation. Section 4 focuses on an alleged indirect benefit: that reduced external debt will help to improve macro-economic stability, hence leading to increased domestic resources and aid flows in the future as well as lower deforestation rates. Section 5 summarises the institutional budgetary procedures associated with debt-for-nature swaps, and discusses whether such swaps adhere to the new aid paradigm's insistence on alignment with government policy and systems. Each section concludes by stating the extent to which the recent US-Indonesia case overcomes the typical shortcomings outlined in the literature. The article concludes by suggesting that whilst a second generation of debt-for-nature swaps should be avoided, there is a need to debate innovative ways of linking debt service repayments to forest conservation.

2. DEBT-FOR-NATURE SWAPS: WHAT ARE THEY AND WHERE DID THEY COME FROM?

Debt-for-nature swaps belong to a broader category of debt conversion programmes. Their origins can be traced to debt-for-equity exchanges triggered by the Latin American debt crisis in the early 1980s. The secondary market for developing country debt expanded rapidly at this time as lending agencies sought ways to curb losses (Thapa, 1998). Originating in Chile in 1985, debt-for-equity schemes allowed investors to redeem external debt titles, obtained at discount on the secondary market, with the debtor country in return for local currency to be invested as equity in national companies (Moye, 2001). The rationale was that debtor countries would benefit from debt relief, while foreign investors obtained stock holdings at preferential exchange rates (Buckley, 2009).

Such swaps were practiced widely in the late 1980s, often linked to the privatisation of public assets, and peaked in 1990 with a combined swap volume of US $27 billion (Kaiser and Lambert, 1996).[3] However, particularly from the mid-1990s onwards, their popularity started to dwindle as the value of developing country debt appreciated within the secondary market due to the improved stability and solvency of major economies such as Argentina, Brazil, Chile and Mexico (Ruiz, 2007).[4]

As is widely acknowledged, applying the concept of debt-for-equity swaps to environmental protection was first proposed in 1984 by Dr. Thomas Lovejoy, then vice-president of the World Wildlife Foundation (see Lovejoy, 1984). Conservationists like Lovejoy argued that the mounting pressure on highly indebted countries to service external debt was leading to an increase in primary commodity exports, often being the only source of foreign exchange in these economies, and this to the detriment of the environment. Debt-for-nature swaps were seen as a way of raising funds for combating environmental degradation, at the same time alleviating debtor countries' desperate (and environmentally damaging) search for hard currency (Sheikh, 2008). The first agreement was signed between Conservation International and Bolivia in July 1987.[5]

The Nature Conservancy, World Wildlife Fund and Conservation International brokered numerous similar swaps in the following decade, mainly in Latin American countries (Sheikh, 2008). Between 1987 and 1997 debt-for-nature swaps accounted for US$ 134 million worth of commercial developing country debt, purchased at an average discount of 78 percent, and US$ 126 million of local currency counterpart funds targeted to conservation (Development Finance International, 2009). In addition to the use of commercial debt titles, in 1991 the Paris Club, a forum for negotiating debt restructurings between indebted developing countries and official bilateral creditors, introduced a clause that allowed members to convert all official public

[3] Their attractiveness was further aided by the liberalisation of US banking regulations (see Kaiser and Lambert, 1996).

[4] Further reasons include growing criticisms of the privatisation agenda, growing realisation of the inflationary character of these often large-scale transactions and their failure to draw in new additional investment (Buckley, 2009).

[5] Using a US$ 100,000 grant from the Frank Weeden Foundation, Conservation International acquired commercial Bolivian debt with a nominal value of US$ 650,000. It redeemed this title with the Bolivian government in exchange for a commitment to conserve 3.7 million acres of forest, and a contribution of US$ 100,000 worth of new bolivianos to a US$ 250,000 fund for biosphere reserve management (Occhiolini, 1990).

debt through debt swaps with social or environmental objectives (Jha and Schatan, 2001; Ruiz, 2007; see also Paris Club, 2009a). This led to a marked increase in debt-for-nature initiatives. Canada, Finland, France, Sweden, Switzerland and the United States were the first countries to make use of the Paris Club clause in the environmental sphere (see Moye, 2003).

Above all, the United States has played a leading role in conducting bilateral (non-commercial) debt-for-nature programmes. A cornerstone of recent exchanges has been the Tropical Forest Conservation Act (TFCA), passed by Congress in 1998, which expanded the 1990 Enterprise for the Americas Initiative (EAI) away from just Latin American and Caribbean countries to any developing country with tropical forests (Moye, 2001; Sheikh, 2008).[6] Despite the TFCA, the overall number of debt-for-nature swaps has declined since the mid-1990s. Just as with debt-for-equity swaps, the appreciation of the value of commercial debt titles on secondary markets has made debt-for-nature swaps less attractive for environmental groups, at least from a financial perspective (Sheikh, 2008). Moreover, debt swaps in all their guises have been subject to thorough critique. They generally failed to deliver additional resources to debtor countries or more resources for sectoral or public goods purposes, and were conducted at an insufficient scale with inappropriate conditionalities (see sections 3, 4 and 5). Debt relief practice thus moved away from debt swaps to comprehensive and large-scale debt relief initiatives such as the Heavily Indebted Poor Countries (HIPC) Initiative and its successor, the Multilateral Debt Relief Initiative (MDRI), with policy and system alignment (see section 5) facilitated through the attached Poverty Reduction Strategy (PRS) process.[7]

In spite of earlier critiques, recent years have seen the re-emergence of debt swaps in a number of sectors. For example, debt-for-education swaps and debt-for-health swaps have been pursued (see OEI, 2006 and Global Fund to Fight Aids, Tuberculosis and Malaria, 2007, respectively) and critiqued (see Cassimon et al., 2009 and Cassimon et al., 2008). Akin to the latest swap initiatives in the health and education sector, debt-for-nature swaps now typically target low- and middle-income non-HIPC-eligible countries and non-HIPC/MDRI-eligible debt titles. As highlighted above, the main advocate is the United States, initiating 13 such operations with 12 different debtor countries under the TFCA between 2000 and 2007. Environmental groups such as The Nature Conservancy, World Wildlife Fund and Conservation International have often subsidised part of the debt relief granted by the United States to these countries (see Sheikh, 2008; USAID, 2009b). Other creditor countries, such as Germany and France, for example, have also pursued new debt-for-nature initiatives (Buckley, 2009; Viltz, 2008).

[6] A further example comes from a transition economy. The Polish EcoFund, established by five Paris Club members in 1991, agreed to cancel debt claims in exchange for US$ 474 million in local currency funds disbursed until 2010 for environmental projects on air and water pollution, greenhouse gas emissions and biodiversity. The United States was by far the largest donor in this initiative, forgiving 10 percent of its bilateral debt in exchange for Polish counterpart contributions of US$ 370 million (OECD, 1998).

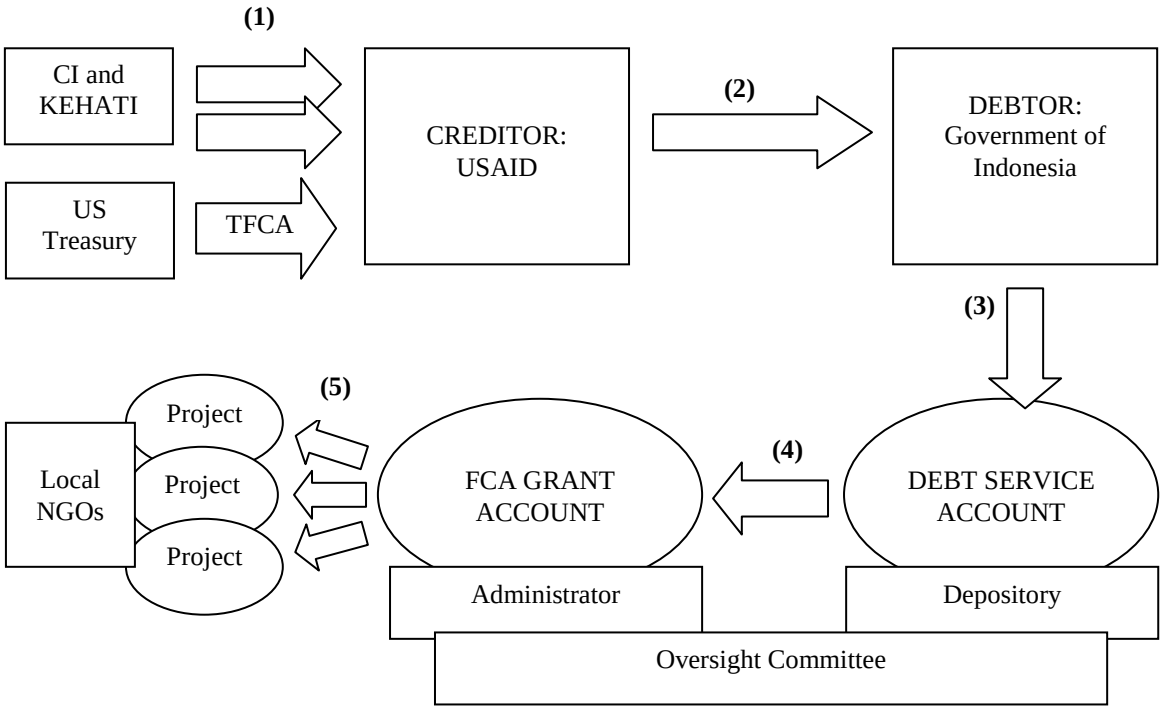
[7] The HIPC Initiative, launched in 1996 by the IMF and the World Bank, aimed to make a selected number of severely indebted low-income developing countries' debt service payments realistic and achievable, and debt burdens sustainable. Creditors were asked to contribute debt relief in proportion to their volume of debt claims. The Enhanced HIPC Initiative in 1999 relaxed eligibility and progress criteria and introduced process conditionality through Poverty Reduction Strategies, instead of policy conditionality associated with pricist and state minimalist structural adjustment loans of the late 1980s and early 1990s. In 2005, the IMF, World Bank and African Development Fund, through the MDRI, committed themselves to debt relief beyond HIPC, promising to forgive all remaining debt owed to them by countries that completed the whole HIPC process. To date, HIPC debt reduction packages have been endorsed for 35 countries, good for an estimated US$ 51 billion of nominal debt service relief over time (IMF, 2009a; World Bank-IEG, 2006).

The case under examination here is the recent American debt-for-nature swap with Indonesia, representing the 15th and single largest swap under the TFCA so far (see USAID, 2009a; Huff, 2009). The swap, signed on the 30th June 2009, involves four main actors: the US government, the Indonesian government, Conservation International, and an Indonesian environmental foundation – *Yayasan Keanekaragaman Hayati Indonesia* (hereafter abbreviated as KEHATI).

The US government has agreed to forgive six debt claims (all foreign assistance loans from 1974-76) owed by Indonesia to the US Agency for International Development (USAID) in exchange for a pledge to spend an equivalent amount on grants to support local NGOs involved in tropical forest conservation projects in Sumatra (which is extremely rich in biodiversity). The outstanding principal and interest payments of US$ 29,921,500.22 (as of the 15th May 2009) have been forgiven for a commitment to deposit instalments for an identical sum (also denominated in US$) into a Debt Service Account with HSBC in Singapore (Garbaliauskas, 2009). Through the TFCA, USAID receives US$ 20 million from the US Treasury, and US$ 1 million each from Conservation International and KEHATI for the costs incurred in relieving the Indonesian Government from its obligations. The remaining US$ 7.9 million of claims against Indonesia is borne by USAID itself.

In accordance with instructions from an oversight committee, the depository of the Debt Service Account, HSBC, will make periodical transfer payments (denominated in US$ or Indonesian Rupiah) to a Forest Conservation Agreement (FCA) Grants Account. In response to calls for proposals, the administrator of this account, initially KEHATI, will then disburse grants to eligible environmental NGOs operating in tropical forest areas in Sumatra after proposals are approved by the oversight committee (US Government and Government of Indonesia, 2009). This set of transactions is illustrated in Figure 1.

Figure 1. Schematic overview of the debt-for-nature swap between the US and the Indonesian Government



(1) Under the TFCA, the US Treasury contributes US$ 20 million to USAID. In addition, Conservation International and KEHATI each pay a swap fee of US$ 1 million to USAID.
(2) The US Government cancels six debt claims, with a nominal value of US$ 29,921,500.22, owed by the Indonesian Government to USAID.
(3) The Indonesian Government pays in instalments the sum of US$ 29,921,500.22 into a Debt Service Account.
(4) In accordance with instructions from an oversight committee, the depository of the Debt Service Account (HSBC) makes periodical transfers, denominated in US$ or Indonesian Rupiah, to a FCA Grants Account.
(5) After approval by the oversight committee, the administrator of the FCA Grants Account (KEHATI) disburses grants to eligible NGOs to execute environmental projects.

Source: Authors' representation on the basis of US Government and Government of Indonesia (2009).

We now assess the extent to which this debt-for-nature swap overcomes the generic shortcomings of this type of financial transaction, starting with two alleged direct benefits: an increase in available resources to the debtor country, and extra funding for conservation purposes.

3. DIRECT BENEFITS

3.1. Increase in available resources to the debtor country

Debt-for-nature swaps are supposed to increase net financial transfers to recipient countries. Through a swap a debtor government is able to divert public resources, otherwise leaving the country via debt service payments in foreign currency, to domestic spending on environmental concerns. In other words, debt swaps, as any other form of aid intervention, transfer international purchasing power. Moreover, they are said to generate additional 'fiscal space' in the recipient country's budget, which that country can spend without putting the stability of its fiscal and macro-economic position at risk (Heller, 2005). However, there are three good reasons why this does not always occur.

First, there may be a conflict between the timing of annual savings from debt relief and the timing of domestic counterpart payments. Debt relief savings are realised gradually, typically over many years or even decades, depending on the contractual repayment terms and schedule of the underlying debt. In contrast, domestic counterpart payments are often frontloaded, becoming due within a shorter time period. A poorly structured debt-for-nature swap where annual domestic counterpart payments occur prior to the realisation of debt relief savings may therefore worsen the government's fiscal position instead of improving it. In this respect, the reported nominal value of the cancelled debt in a swap is not necessarily a reliable measure of the budgetary gains a swap can create. The net present value (NPV) of future debt service payments and counterparts payments is arguably a better estimator (in other words, the sum of annual net flows discounted at the interest rate at which the debtor country can raise this money on domestic markets). In particular when debt is highly concessional, with long maturity and repayment periods and below-market interest rates, as is the case with claims accounted for as Official Development Assistance (ODA), NPV gains will be significantly lower than nominal ones.

Second, and more importantly, only the share of debt service that would have been actually paid to the creditor in the absence of debt relief will generate true fiscal space. To presuppose that all debts would have been fully serviced without the swap arrangement (in other words, assuming the probability of default to be zero) is clearly optimistic, especially when a country is experiencing debt service problems. This is especially the case since credit availability has tightened after the global financial crisis. If the debtor would have failed to meet its debt obligations, the resource effect of debt reduction through swap practices is partly virtual, referring to an 'accounting clean-up of historical and future arrears accumulation' (Cassimon and Vaessen, 2007).

Third, debt-for-nature swaps are often based on the tacit assumption that these interventions are additional to other forms of donor support (especially when swaps concern countries and debt titles outside the HIPC/MDRI framework). However, debt-for-nature swaps may well crowd out other, potentially more effective, forms of aid (as accounting rules allow donors to treat debt relief operations as substitutes for new aid). Most notably, the full nominal value of debt relief is counted as ODA, the primary benchmark used by the Development

Assistance Committee (DAC) of the OECD to determine donor disbursements.[8] In this respect, debt-for-nature swaps can be considered an attractive option to boost a donor's ODA figures, and may lead to reduced expenditures on other categories of ODA. Moreover, since the nominal value of debt-for-nature operations is typically an overestimation of both the debtor's benefit and the creditor's cost, a swap may provide fewer resources than, say, direct budget support. Evidence from empirical studies suggests that past debt swaps have *not* been additional to other sources of donor financing (Birdsall et al., 2003; Ndikumana, 2004).

The foregoing suggests that debt-for-nature swaps which seem generous at first sight may only lead to minor hard currency as well as budgetary gains for the recipient country. Indeed, debt relief from the first generation of debt swap initiatives, in which debt-for-nature swaps occupied an important role, was indeed largely fictitious in fiscal terms (see e.g. Krugman, 1988; Bulow and Rogoff, 1991). And if counterpart payments are large and early compared to the expected debt service savings, or the operation crowds out other aid interventions, debt swaps, unlike straight donations, can even lead to lower net financial transfers, and cause fiscal space to shrink (Occhiolini, 1990).[9]

The case under review does not perform consistently across these three issues. On the one hand, as the original debt service schedule has been adopted for the deposit of counterpart instalments into the Debt Service Account, there is no conflict between the timing of annual savings and counterpart payments. However, on the other hand, no fiscal space has been created as the entire previous outstanding principal and interest sums are still due (now going into the Debt Service Account instead of to USAID) without any positive discount. Neither has there been any hard currency relief since payments remain US$ denoted. As such, no transfer of international purchasing power occurs. In sum, the swap does not appear to be generating additional resources for the Government of Indonesia.

Turning to the second issue, as Indonesia is labelled as a non-HIPC country and has serviced all of its external debt, the probability of non-full debt repayment appears relatively small. It is important to note, however, that Indonesia enjoyed Paris club debt rescheduling on concessional Houston terms for lower middle-income countries in 2000 and again in 2002 (Paris Club, 2009b). This suggests some previous debt service problems which may have been prevented by rescheduling arrangements. In this respect, the possibility of default cannot be discarded entirely.

Finally, it is difficult to gauge the effect of the US-Indonesian swap on other US donor support. Since the Federal Credit Reform was passed in 1990, the US Treasury is obliged to make appropriations to fund debt-for-nature transactions with official public debt, covering the estimated NPV costs of the interest and principal payments foregone. For example, under the TFCA, appropriations have added up to US$ 117 million from 2000 to 2006 (Sheikh, 2008). It is however unclear how much of the US$ 20 million contribution to USAID is deducted from the US development aid budget. In view of the aforementioned ODA accounting

[8] To avoid double counting, this is not the case for debt titles that refer to donor support which already previously qualified as ODA.

[9] This is not to say that replacing debt service in hard currency with local currency counterpart payments does not provide some benefit if the debtor country is suffering from severe foreign exchanges shortages (Deacon and Murphy, 1997).

rules, the absence of additionality could arguably be taken as the default. The burden of proving additionality falls on the donor institutions that claim it.

3.2. Increase in available resources for conservation

In addition to providing additional financial resources to the debtor country, it is often asserted that debt-for-nature swaps create further immediate benefits: not for the nation in question, but for global level public goods support through an increase in resources for the conservation of forests (and thus carbon sequestration and reduced carbon emissions) and, to a lesser extent these days, biodiversity. Clearly, the embedded 'earmarking' of debt savings towards conservation would suggest this. The alleged increase in overall funds for conservation purposes, however, depends on additionality in both donor support and government expenditure in this area. These are now discussed in turn.

First of all, and related to the third argument of section 3.1, at the donor level, debt-for-nature swaps may well substitute for other interventions *aimed at conservation*, and as such they may not be additional.

Second, and in a similar vein, debt-for-nature swaps do not automatically result in additional resources spent on conservation purposes within recipient countries (Hansen, 1989). When confronted with a schedule of counterpart payments, government may decide to cut back on their own efforts and reduce projected budget allocations for conservation spending. A certain degree of so-called 'fungibility' is inherent to most aid instruments, but often thought to be more pronounced in the case of specifically targeted support such as debt-for-nature swaps (Feyzioglu et al., 1998).

A significant degree of additionality in a double sense, with freed-up resources coming on top of other donor interventions as well as budget lines already reserved by the recipient for conservation goals, should be a necessary condition for the enactment of debt-for-nature swaps. So, how does our Indonesian case perform against these two additionality requirements?

It is again difficult to gauge the degree of additionality of the US-Indonesian swap to overall US donor support for conservation. To our knowledge, there is also no systemised data available on to what extent recent debt-for-nature swaps, including our case study, were subject to fungibility. Measuring debtor country spending on the environment against an historical baseline may possibly provide some insights here. The Forest Conservation Agreement between Indonesia, Conservation international and KEHATI states that grant proposals for conservation projects that target tropical forest sites whose species and ecosystems differ from those already managed under the national system of classified Protected Areas[10] will be prioritised, hinting at some degree of additionality to Indonesia's own conservation efforts. This 'complementarity' criterion is however only one out of five grounds for prioritisation and moreover no necessary condition for project selection (Government of Indonesia, CI and KEHATI, 2009). Overall, it has been hard to assess donor additionality and government fungibility. Involved parties could well be able to provide further details.

[10] See e.g. NISP (2006) for more information on this Protected Area system and its financing modalities.

4. INDIRECT BENEFITS

Unlike other aid interventions, debt-for-nature swap may possibly have extra (more indirect) benefits through helping recipient countries to surmount a 'debt overhang' (see e.g. Krugman, 1988). High debt service payments in a highly indebted country precipitate, or are expected to lead to, punitive taxation against the most productive sectors of the economy, thus reducing investment, economic stability, lowering government revenues, and, finally, the ability to meet debt service payments (Cassimon et al., 2008; Occhiolini, 1990).[11] Debt relief interventions, such as debt-for-nature swaps, could help to break this vicious circle and restore a self-enforcing process of economic stability. This will then in turn lead to greater domestic resource mobilisation in the future (for example through more efficient taxing practices or increased private sector investment). Lowering debt burdens could also alter the distribution of aid flows in a positive manner. Indeed, over the years bilateral donors have tended to provide the most-indebted countries with new loans to allow them to stay current on their debt service payments, rather than using these funds for development purposes in less-indebted countries with often higher-quality policy choices (a practice that has been termed 'defensive lending' - see e.g. Birdsall et al., 2003). Debt relief would reduce the need for such defensive lending and allow recipient countries to attract more aid as donors aim to increase overall aid effectiveness by channelling funds to countries where the poverty elasticity of aid is greater. Another indirect benefit of lower (hard currency) indebtedness in developing countries might be the reduced need for primary resource exports and therefore lower extraction and deforestation rates.[12]

However, debt relief must reach a critical mass and be delivered in a harmonised manner to stand a chance in freeing a country from its debt burden and the related economic deadlock. In contrast, debt-for-nature swaps have always been piecemeal interventions whose scale, in comparison with recipient countries' overall debt stock, is deemed insufficient to make a meaningful impact (see e.g. Hamlin, 1989; Hansen, 1989; Patterson, 1990; Thapa, 1998).[13] That only a 'discrete shock' under the form of sizeable and comprehensive debt relief operations (Bulow and Rogoff, 1991) can address a situation of 'debt overhang' has led to the gradual demise of earlier debt swaps and paved the way for large-scale initiatives such as HIPC and the prior Brady initiative for middle-income countries.[14] For reasons of limited size, typical debt for-nature swaps have no real potential of garnering more domestic resources in the future, improving aid allocation or bringing down deforestation rates in recipient countries.

So, how does our Indonesian case compare here? Despite being the largest debt-for-nature swap yet conducted under the TFCA, the US$ 30 million nominal value pales into insignificance when compared with Indonesia's total outstanding debt of US$ 149.7 billion in

[11] This is not to say that the 'debt overhang' hypothesis is not contentious. For example, Chauvin and Kraay (2005) dispute that the hypothesis holds for low-income countries. On the other hand, there is some evidence that middle-income countries do suffer such effects from excessive debt burdens (see Patillo et al., 2004). For the specific case of Indonesia, Cholifihani (2008) suggests that debt overhang is a long-term rather than short-term problem.

[12] See footnote 2 on the 'double dividend hypothesis'.

[13] The Polish EcoFund swap is a notable exception.

[14] The Brady debt reduction deals between 1989 and 1995 helped mostly Latin American countries swap syndicated debt held by private creditors for bonds with lower nominal value and/or reduced interest rates. These transactions typically involved several hundreds of millions of US$ per country and have been said to have deterred debt overhang, at least to some extent (Arslanalp and Henry, 2005).

nominal value in 2008, equal to 29.3% of GDP and 96.7% of exports in 2008 (IMF, 2009b). In other words, the swap only concerns 0.02% of Indonesian debt (in nominal terms) and can not be expected to sort any (indirect) effects on Indonesia's economic position. The total absence of hard currency relief further implies that deforestation rates could not have been affected. Moreover, Indonesia's latest debt sustainability analysis (IMF, 2009b) suggests that the country has steadily improved both its external and total (external and domestic) public debt position over the last decade. Nevertheless, in recent years, domestic public debt has become the biggest threat in Indonesia (World Bank, 2007), a trend observed in many other (middle-income) developing economies (Panizza, 2008).

5. ALIGNMENT WITH GOVERNMENT POLICY AND SYSTEMS

Granting debt relief is very similar to providing budget support, to the extent that both modalities free up additional budgetary resources for the recipient. As it is of course not necessarily the case that these extra funds will be put to good development use, donors have tended to curtail recipient countries' choice by controlling to a certain degree the ways in which the resources will be spent. Just as conditionality on 'new' concessional lending has shifted from policies (such as stipulating specific public sector reforms) towards supporting processes (such as the completion of a Poverty Reduction Strategy Paper or PRSP), the conditions attached to debt relief have evolved.

The previous approach has been to give binding instructions on the allocation of funds, referred to as 'earmarking' in donor jargon. Different types of 'earmarking' exist (see e.g. IMF and IDA, 2001) and donor practice has changed through time. For example, many donors now seek to influence recipient government behaviour through policy dialogue on fiscal prudence, good governance and respect for human rights (see e.g. Mold, 2009).

Unsurprisingly, debt swaps implemented during the 1980s and 1990s, including debt-for-nature swaps, often practiced 'micro-earmarking', with donors attempting to keep track of the use of freed-up resources. To accomplish this, counterpart payments were established outside recipient countries' regular budgets jointly managed by donor, debtor and, in some cases, NGO brokers. Donors also imposed mechanisms for implementation, and monitoring and evaluation, which circumvented the recipient's established system (see Roemer, 1989).

Whilst micro-earmarking allowed donors to keep an eye on how debt relief was utilised (thus increasing accountability to constituencies at home), such surveillance increases the chances of the displacement of domestic resources to other budget priorities (in other words, fungibility). Moreover, the creation of parallel systems suffers from high transaction costs, prevents long-term capacity building, and reduces the sense of national ownership (and hence, perhaps, the longevity of such practices). Donors now claim to leave the allocation of funds, planning, budgeting, implementation of projects and programmes, and monitoring and evaluation processes in the hands of the recipient government. At the same time, they try to use their influence to gradually improve public sector functioning and, along with other stakeholders, engage government in dialogue on key national development issues (see Molenaers and Renard, 2009).

Indeed, debt relief practice has been at the forefront of this evolution in donor/government relations, as evidenced by the use of Poverty Reduction Strategies in the enhanced HIPC Initiative.[15] As such, most debt relief practice has evolved to what one can denote as 'debt-to-PRSP swaps' (Cassimon and Vaessen, 2007:24).

In recent years, this new aid delivery paradigm has been further elaborated, resulting in the 2005 Paris Declaration on Aid Effectiveness and the 2008 Accra Agenda for Action. In Paris and Accra, bilateral and multilateral donors subscribed, *inter alia*, to the concepts of 'policy alignment' and 'system alignment' (see OECD-DAC, 2005, 2008). The

[15] Since 1999, the preparation of a PRSP is a precondition to qualify for debt relief under the Enhanced HIPC Initiative and gain access to new concessional IMF/World bank loans (see IMF, 2009c).

former refers to focusing donor support on partner countries' national development strategies, whereas the latter encourages the use of countries' own institutions and public systems for financial management, implementation, monitoring and evaluation where these are deemed effective, accountable and transparent. But to what extent do debt-for-nature swaps adhere to the 'principles' of 'policy alignment' and 'system alignment'?

5.1. Policy alignment

On policy alignment, there are two key questions: first, ownership and control of conservation measures; and second, coherence with the environmental (and developmental) strategy of the country.

The strong involvement of international NGOs in the first generation of (primarily private) swaps raises questions about the recipient government control in such initiatives. Although typical debt-for-nature contracts required NGO projects to be consistent with government policies, host government involvement was generally limited to veto rights on the projects proposed (see Deacon and Murphy, 1997). Often there was no room for governments to actively define programmes and/or projects according to their own national development or sectoral priorities. Unsurprisingly, within Latin American countries such schemes were criticised as being forms of 'eco-imperialism' or 'eco-colonialism' (see Greener, 1991; Gugler, 1997). Swaps involving public debt have also suffered from a lack of debtor government control on environmental measures (see Jha and Schatan, 2001).

The most influential body in the US-Indonesian debt swap procedure is the oversight committee. This is responsible for, among other tasks, the establishment of a strategic plan with key conservation objectives, the final approval of eligible grant recipients and their proposals, the supervision of all payment transfers between the different accounts and the annual evaluation under the TFCA. Clearly, the composition of the oversight committee is of the utmost importance. We find that only one Indonesian Government official can be a permanent voting member of this decision-making body. The other three permanent members are designees of the US Government, Conservation International and KEHATI. Three additional oversight committee members are nominated by designated environmental NGOs of, or active in, Indonesia (Government of Indonesia, CI and KEHATI, 2009). In other words, control of the debt swap conservation measures is largely taken out of the hands of the Indonesian Government and transferred to non-governmental (and sometimes non-Indonesian) actors. Such a structure could raise questions regarding national ownership and could endanger the longevity of these measures.

We now turn to coherence with environmental (and developmental) strategy of the country. We focus firstly on a recent environmental strategy document from Indonesia - the National Action Plan Addressing Climate Change. In this document, Indonesia's Ministry of Environment sets out mitigation and adaptation strategies in response to climate change and calls upon bilateral and multilateral partnerships to tackle the environmental problems faced. Deforestation, especially in Sumatra, is given considerable attention. Moreover, within the mitigation and adaptation strategies outlined, the protection and management of forest ecosystems and prevention of illegal logging and reforestation are recurrent themes. Debt swaps are one of the non-conventional financing instruments deemed desirable here

(Government of Indonesia, 2007). Therefore, there seems to be a reasonable fit between the aims of this strategy and the activities to be funded under the debt-for-nature swap agreement.[16]

More importantly, and in sharp contrast with most developing countries, Indonesia *has* made noticeable efforts to mainstream broader environmental matters into its development agenda.[17] Recognising the interrelationship between climate change control, economic growth and poverty reduction, Indonesia's national planning agency or *Badan Perencanaan dan Pembangunan Nasional* (BAPPENAS) has produced the National Development Planning Response to Climate Change or 'Yellow Book' which explicitly attempts to integrate the above-mentioned National Action Plan into the 2010-2014 National Mid-Term Development Plan (see Tedjakusuma, 2009; Indrawati, 2008). The issuance of this Yellow Book points at the central role climate change mitigation/adaptation, and thus by extension the conservation of tropical forests, occupies in Indonesia's overall national development strategy. Again, debt swaps feature prominently on BAPPENAS's priority list of climate finance mechanisms (see Triastuti, 2008; Indrawati, 2008).

Further evidence of the inclusion of climate change within Indonesia's development planning processes comes from the OECD's Aid Architecture and Financing Unit (see OECD, 2009). This highlights how Indonesia is a leading example of policy integration. For example, and in a similar manner to Bangladesh, the country has created a Climate Change Trust Fund to allow global public resources to be delivered 'horizontally' to relevant Ministries.[18] Overall, there appears to be ample policy coherence between Indonesia's developmental strategies and the recent debt swap.

5.2. System alignment

System alignment, or in other words working with the recipient country's systems and procedures to the maximum extent possible, is crucial for long-term capacity building and strengthening of public sector agencies active in environmental affairs. Previous studies on debt-for-nature swaps have paid little attention to the concept of system alignment. However, as international NGOs have brokered a number of deals, it is likely that parallel budget, implementation, and monitoring and evaluation systems have been utilised (not least as an international NGO may require a degree of oversight not possible within government procedures). As a result, opportunities to make government agencies more effective and develop the experience and skills of their personnel have been foregone (Patterson, 1990). For example, Gugler (1997) indicates that, in many cases, new financially autonomous environmental funds or foundations have been established in parallel to existing structures.

[16] See USAID (2009a) and Government of Indonesia, CI and KEHATI (2009), respectively, for detailed lists of these eligible activities.

[17] Prowse et al. (2009) note that contrary to the prominence of climate change on the international policy agenda, many national development plans, such as Poverty Reduction Strategy Papers and equivalent National Development Strategies, ignore climate change and wider environmental concerns.

[18] Whilst the Climate Change Trust Fund demonstrates how the debt swap is aligned with national policy, it also illustrates how it has no system alignment for the debt swap is entirely outside this funding basket.

Our Indonesian case is clearly no exception to this. The ringfencing arrangements made for the use of the debt swap proceeds, namely the Debt Service and FCA Grants Accounts, largely bypass the Indonesian Government's institutions and public systems. In Paris Declaration terms, a so-called Parallel Project Implementation Unit (PIU) was created (OECD-DAC, 2005), resulting in a duplication of costs. Indeed, extra management expenses incurred by the administrator need to be approved by the oversight committee and are paid from the Debt Service Account, thereby diminishing the sum available for project grants.

To be eligible for grants under the debt-for-nature swap deal, candidate organisations need to be operating and/or established in Indonesia and can not be affiliated with the administrator, depository, Indonesian Government, Conservation International, KEHATI or a designated member institution. Once selected, grant recipients are obliged, at their own expense, to keep accurate accounts and present complete annual financial statements in accordance with a set of agreed upon principles and standards. Moreover, a detailed narrative report on progress towards the goals set forth in the original grant proposal and a certification by an independent auditor need to be submitted (Government of Indonesia, CI and KEHATI, 2009). While the focus on local conservation actors can be considered positive, the extensive reporting requirements may arguably deter those (low-capacity) organisations that would benefit most from being involved in the implementation of projects financed by the swap. Overall, the project and proposal based funding structure is likely to impact considerable transaction costs, possibly leading to a lack of predictability and longevity of funding.

6. CONCLUDING REMARKS

With climate change an ever more important item on the international agenda, the importance of forests as carbon sinks, extractors of carbon dioxide from the atmosphere, and a primary source of biodiversity is only set to increase. Schemes to reduce emission from deforestation and support forest conservation efforts (such as REDD-plus), and their integration into a global climate regime, have been recently discussed at various occasions. The financing modalities of such schemes remain however undecided. All this appears to have renewed interest in debt-for-nature swaps, a possible source of financing included in negotiation documents at Bonn and Copenhagen. The re-emergence of such swaps poses serious questions as to the extent to which practice has incorporated the insights of earlier critiques. As has been demonstrated in this article, the US-Indonesian debt-for-nature deal, which we consider as a litmus test for current swap practice, performs unevenly across five typical shortcomings.

First, adopting the original debt service schedule (with timing and instalments staying the same as before) means that this debt swap does not destroy the fiscal space of the Indonesian Government. But neither does it create fiscal space. The Government of Indonesia is still liable for the entire previous outstanding principle and interest sums and does not enjoy any positive discount.

Second, from the documents and data we have been able to assemble it remains unclear whether the freed-up resources come on top of other donor support and reserved domestic budget lines for conservation goals. It is difficult for outside researchers to assess 'double additionality' and involved parties may be able to provide further details on this issue.

Third, relative to Indonesia's total debt burden, a US$ 30 million debt swap is too insignificant to create any indirect (positive) economic effect. One cannot expect the debt scenario to benefit from this piecemeal transaction, especially as domestic debt is outpacing external debt in Indonesia.

The swap's performance with respect to the new aid delivery paradigm's emphasis on alignment with government policy and systems is also mixed. Fourth, policy coherence between the aims of the debt-for-nature swap and Indonesia's own environmental and developmental priorities seems to have been respected. But, fifth and finally, the two accounts and the decision-making structures (the oversight committee) handling the swap have been established in parallel to existing (government) structures and separate (strict) reporting requirements have been put in place. Such practice undercuts ownership and sustainability and augments transaction costs.

While it is possible (in theory) to make debt-for-nature swaps more efficient and effective instruments by engineering them in such a way that they adhere to the basic principles of fiscal space, double additionality and policy and system alignment, the scaling up of these instruments remains a major problem. Large-scale debt relief schemes similar to HIPC/MDRI but earmarked to conservation/ climate purposes are not feasible. Nearly all bilateral and multilateral debt owed by HIPC countries is due to be cancelled when these countries reach their completion point under the HIPC process. Only those bilateral and multilateral debt titles that rest with a limited number of non-HIPC low-income and lower middle-income countries

(such as Indonesia) seem realistically qualified for new debt-for-nature initiatives (see Development Finance International, 2009). These debt titles are, however, not immediately accessible, as vertical funds such as the Global Fund (through its Debt2Health programme) in the health sector and an envisaged EduFund or Debt4Education initiative in the education sector (see e.g. Filmus and Serrani, 2009) are expected to focus on the same claims. Many actors seem to be fishing in the same pond and for their own purposes. A second wave of debt-for-nature swaps thus appears to be neither practicable nor desirable.

This is not to say that the concept behind debt-for-nature should be abandoned all together. Indeed, as the climate crisis is beginning to unfold, there is a need to debate broader initiatives that link debt service payments to climate change mitigation/adaptation, and to forest conservation efforts specifically. Rather than attempting to sidestep best practices, a promising approach might be to mainstream environmental concerns into the existing HIPC/MDRI framework, raising policymakers' awareness and aiding developing countries to take fully into account climate change issues when formulating their national development strategies (see Prowse et al., 2009). Indonesia arguably stands as an exemplar in this respect.

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