

1-1-2010

Myths of California Water - Implications and Reality

Ellen Hanak

Jay Lund

Ariel Dinar

Brian Gray

Richard Howitt

See next page for additional authors

Follow this and additional works at: https://repository.uchastings.edu/hastings_environmental_law_journal



Part of the [Environmental Law Commons](#)

Recommended Citation

Ellen Hanak, Jay Lund, Ariel Dinar, Brian Gray, Richard Howitt, Jeffrey Mount, Peter Moyle, and Barton “Buzz” Thompson, *Myths of California Water - Implications and Reality*, 16 HASTINGS WEST NORTHWEST J. OF ENVTL. L. & POL’Y 3 (2018)
Available at: https://repository.uchastings.edu/hastings_environmental_law_journal/vol16/iss1/2

This Article is brought to you for free and open access by the Law Journals at UC Hastings Scholarship Repository. It has been accepted for inclusion in Hastings Environmental Law Journal by an authorized editor of UC Hastings Scholarship Repository.

Myths of California Water - Implications and Reality

Authors

Ellen Hanak, Jay Lund, Ariel Dinar, Brian Gray, Richard Howitt, Jeffrey Mount, Peter Moyle, and Barton
“Buzz” Thompson

Debt-for-Development Exchanges: Using External Debt to Mitigate Environmental Damage in Developing Countries

*Steven Freeland**

*Ross P. Buckley***

This article analyzes the conception, evolution and recent development of debt-for-nature exchange techniques. It explores how the lessons of the early, problematic exchanges have been learned and how the highly successful exchanges conducted recently in Madagascar, Egypt, and Kenya have been structured. It assesses the possibility of the Clean Development Mechanism under the Kyoto Protocol being tapped as a source of ongoing funding for projects, and concludes by arguing that, given the various benefits exchanges offer both donors and recipients, these techniques have been underutilized and deserve more careful consideration.

I. INTRODUCTION	78
II. 'FIRST GENERATION' DEBT EXCHANGES	80
A. Bolivia (1987) - 'Debt-for-Conservation'	80
B. Further 'First Generation' Debt-for-Nature Swaps	82
III. 'SECOND GENERATION' DEBT-FOR-NATURE EXCHANGES	84
A. Costa Rica (1989) - 'Debt-for-Conservation' and 'Debt-for-Industry'	85
B. Poland (1991) - 'Debt-for-Democracy'	86
C. Bulgaria	87
D. United States Legislative Initiatives	89
IV. RECENT DEBT-FOR-NATURE EXCHANGES	91
A. The Madagascar Foundation	94
B. Millennium Development Goals, the Paris Declaration and Debt-for-Nature	95

* Associate Professor of International Law, University of Western Sydney; Visiting Professor of International Law, University of Copenhagen.

** Professor of Law, University of New South Wales; Fellow, Asian Institute for International Finance Law, University of Hong Kong. Sincere thanks to the Australian Research Council for the Discovery Grant that has funded this research and to Lara K. Hall for her invaluable research assistance. The usual disclaimer applies, all responsibility is the authors'.

C. Indonesia, Debt-for-Nature and the Clean
Development Mechanism97

V. CONCLUSION..... 100

I. Introduction

In October 1984, Dr. Thomas Lovejoy, then executive vice president of the World Wildlife Fund (“WWF”), wrote an opinion piece for *The New York Times* that is generally credited with providing the first public formulation of the debt-for-nature idea.¹

Lovejoy proposed that a developing country’s external debt be reduced in return for it taking steps to address issues of environmental concern, and that governments provide tax relief to commercial creditor banks for participating in these transactions.² Lovejoy emphasized the correlation between developing country indebtedness and environmental degradation³ and encouraged environmental NGOs to investigate using the developing country secondary debt market to finance conservation projects. He noted that discounted developing country debt could potentially leverage “conservation dollars to preserve some of the world’s most biologically valuable natural areas while helping countries reduce their external debt.”⁴

This type of debt-exchange transaction is based on the simple notion of a reduction in external debt in return for domestic conservation activities.⁵ In the 1980s, most developing country foreign debt was denominated in U.S. dollars (or other hard currencies). Many developing nations employed short-term, often indiscriminate strategies to produce exports to generate foreign exchange for debt repayment. One of the most destructive activities undertaken in this regard was the clearing of rainforests.⁶ Tropical rainforests are primarily in developing countries, with

1. Thomas E. Lovejoy III, *Aid Debtor Nations’ Ecology*, N.Y. TIMES, Oct. 4, 1984, at A31; J. Eugene Gibson & Randall K. Curtis, *A Debt-for-Nature Blueprint*, 28 COLUM. J. TRANSNAT’L L. 331, 333 n.9 (1990).

2. Julian Conrad Juergensmeyer & James C. Nicholas, *Debt for Nature Swaps: A Modest but Meaningful Response to Two International Crises*, 5 FLA. J. INT’L L. 193, 198 (1990); Timothy B. Hamlin, *Debt-for-Nature Swaps: A New Strategy for Protecting Environmental Interests in Developing Nations*, 16 ECOLOGY L.Q. 1065, 1067 (1989).

3. Nancy Knupfer, *Debt-for-Nature Swaps: Innovation or Intrusion?*, 4(2) N.Y. INT’L L. REV. 86, 87 (1991).

4. Press Release, WWF, World Wildlife Fund and Ecuador Sign Large Debt-for-Nature Swap (Dec. 14, 1987) at 2, in Derek Asiedu-Akrofi, *Debt-for-Nature Swaps: Extending the frontiers of Innovative Financing in Support of the Global Environment*, 25 THE INT’L LAW. 557, 564 (1991).

5. Konrad von Moltke, *Debt-for-Nature: The Second Generation*, 14 HASTINGS INT’L & COMP. L. REV. 973, 975 (1991); Asiedu-Akrofi, *supra* note 4, at 581.

6. Michael S. Sher, *Can Lawyers Save the Rainforest? Enforcing the Second Generation of Debt-for-Nature Swaps*, 17 HARV. ENVTL L. REV. 151, 158 (1993).

twenty-five percent of such forests in Latin America alone.⁷ In the late 1980s, approximately 140,000 acres of tropical rain forest were being cleared in Latin America every day,⁸ prompting predictions that by 2000, “tropical forests will have been largely destroyed.”⁹ As well as clearing forests to convert land to pasture or agriculture, significant amounts of timber were harvested,¹⁰ much of it illegally.¹¹

The use of debt-for-nature swaps has evolved since the early exchanges, and they are now used to address a broad range of environmental challenges. Two broad forms of debt-for-nature exchanges have developed. In the first form, a nation’s debts are purchased by an environmental NGO and offered to the debtor for cancellation in exchange principally for its ongoing protection of a designated parcel of its land. In the second form, the debt is exchanged, usually at a discount, for local currency which is then used by local conservation groups or government agencies for various environmental projects in the debtor country.

The so-called “first generation” exchanges involve the purchase on the secondary market of commercial bank debt by non-governmental organizations. “Second generation” mechanisms are bilateral agreements between donor and recipient governments and use official debt (loans by one nation to another). Second generation transactions have used larger amounts of debt for a broader range of environmental and developmental purposes, the impetus for which was provided by the enactment of a range of legislative provisions in the United States.¹² The most recent debt-for-nature exchanges have evolved even further, as we shall see, to address a broader array of environmental issues and to place the debtor nation at the center of each exchange.

7. Andrew Wolman, *Review of Conservation Payment Initiatives in Latin America: Conservation Concessions, Conservation Incentive Agreements and Permit Retirement Schemes*, 28 WM. & MARY ENVTL. L. & POL’Y REV. 859, 860 (2004).

8. Nina M. Dillon, *The Feasibility of Debt-for-Nature Swaps*, 16 N.C. J. INT’L L. & COM. REG. 127, 127 (1991).

9. *Ecologists Make Friends with Economists*, THE ECONOMIST, Oct. 15, 1988, at 25.

10. Robert J. Buschbacher, *Ecological Analysis of Natural Forest Management in the Humid Tropics*, in RACE TO SAVE THE TROPICS: ECOLOGY & ECONOMICS FOR A SUSTAINABLE FUTURE 59 (Robert Goodland ed., 1990).

11. Despite the United Nations’ international efforts and some domestic measures, illegal logging continues to increase in countries such as Cambodia, Laos, Nigeria, Papua New Guinea, the Philippines, Solomon Islands and Thailand. See Jennifer Lynn Peters, *The Illegal Trafficking of Timber in Cambodia*, 11 COLO. J. INT’L ENVTL. L. & POL’Y 102, 104 (2000).

12. Ross P. Buckley & Steven Freeland, *US Debt for Development Legislation: A Missed Opportunity to Enhance United States’ National Security* (forthcoming 2009) (manuscript on file with the authors).

II. 'First Generation' Debt Exchanges

Early debt-for-nature exchanges involved the cooperation and agreement of environmental NGOs, the developing country's government, and its central bank. These are often referred to as "first generation" debt exchanges. The very first was in 1987 in Bolivia.

A. Bolivia (1987) - 'Debt-for-Conservation'

In 1987, Conservation International ("CI"), a Washington-based environmental NGO, bought US\$650,000 of Bolivia's debt in the international secondary debt market for about US\$100,000. Funding came from a grant given by a private charitable foundation.¹³ Under the debt exchange agreement,¹⁴ this debt was swapped for shares in a newly established company set up to preserve approximately 3.7 million acres of forests and grasslands surrounding the Beni Biosphere Reserve in northeastern Bolivia,¹⁵ an area noted for its biological richness.¹⁶ CI agreed to provide ongoing assistance to Bolivia as "official advisor" to plan and design the protected areas.¹⁷ For its part, Bolivia undertook to provide legal protection for the 334,200-acre reserve, and to establish a local currency fund equivalent to US\$250,000 to manage and administer the protected areas.¹⁸ Bolivia was to contribute US\$100,000 of this sum, with the remainder to come from the United States Agency for International Development ("USAID").¹⁹ Bolivia and a local NGO shared the management of the land, and title to it remained with Bolivia.²⁰

This first debt-for-nature transaction highlighted a range of potential

13. The Frank Weeden Foundation based in San Francisco.

14. Agreement between the Government of Bolivia and Conservation International, 13 July 1987.

15. Asiedu-Akrofi, *supra* note 4, at 565.

16. The reserve supports 6,000-8,000 species of vascular plants, including at least 500 bird species and 13 endangered animal species. See Gibson & Curtis, *supra* note 1, at 354.

17. Press Release, Conservation International, Bolivia Sets Precedent with First Ever 'Debt-for-Nature' Swap (July 16, 1987) at 1, in Priya Alagiri, *Give Us Sovereignty or Give Us Debt: Debtor Countries' Perspective on Debt-for-Nature Swaps*, 41 AM. U. L. REV. 485, 495 n.58 (1992).

18. Marilyn Post, *The Debt-for-Nature Swap: A Long-Term Investment for the Economic Stability of Less Developed Countries*, 24 INT'L LAW. 1071, 1082 (1990); Robert M. Sadler, *Debt-for-Nature Swaps: Assessing the Future*, 6 J. CONTEMP. HEALTH L. & POL'Y 319, 326 (1990).

19. J. Eugene Gibson & William J. Schrenk, *The Enterprise for the Americas Initiative: A Second Generation of Debt-for-Nature Exchanges - with an Overview of Other Recent Exchange Initiatives*, 25 GEO. WASH. J. INT'L L. & ECON. 1, 17 (1991); Gibson & Curtis, *supra* note 1, at 356.

20. Post, *supra* note 18, at 1082.

problems with the debt exchange mechanism. The primary problems that emerged concerned national sovereignty, the position of indigenous peoples, and the enforceability of the agreement.

When the proposed transaction with Bolivia was announced, various Latin American newspapers reported (incorrectly) that a foreign organization had purchased Bolivian "lands considered the national patrimony."²¹ Several Latin American countries criticized the idea of debt exchanges,²² and even though the local organization involved was able to explain the true position, this lingering mistrust associated with the transaction highlighted some of the potential sensitivities associated with debt exchanges.

The local indigenous people were not adequately consulted during the design phase of the project. The Chimane lived in the forest without formal land tenure,²³ but with the advent of the debt exchange, they sought to obtain title to the land. However, the terms of this debt exchange made this impossible.²⁴ Already threatened with the destruction of their natural habitat through indiscriminate and illegal logging, they were now presented with an "American-type" national park model,²⁵ in which their ability to engage in traditional foraging for food and fuel was further restricted. In effect, the debt exchange agreement divested the Chimane of their land rights,²⁶ as many of their traditional activities conflicted with the conservation goals that underpinned the transaction.²⁷ The lack of timely local input represented a major failing of this transaction.

To further complicate matters, Bolivia failed to contribute its equivalent of US\$100,000 to the local currency account until almost two years after the agreement was signed.²⁸ As a result, the USAID funding that was contingent upon Bolivia's contribution was not forthcoming and the

21. Gibson & Curtis, *supra* note 1, at 356.

22. Brazil was initially one of the most vehement critics of the debt-for-nature mechanism. See Antonio N. Picirillo, *The Metamorphosis: Expected Changes in the Brazilian Debt-for-Nature Swap Process and Policy Implications*, 17 *FORDHAM INT'L L.J.* 547, 563-64 (1994). In 1989, Brazil's President Jose Sarney ruled out debt-for-nature swaps citing national sovereignty, and declared, "We accept international aid, but we don't accept conditions." See James Brooke, *Brazil Announces Plan to Protect the Amazon*, *N.Y. TIMES*, Apr. 7, 1989.

23. Eve Burton, *Debt for Development: A New Opportunity for Nonprofits, Commercial Banks, and Developing States*, 31 *HARV. INT'L L.J.* 233, 242 n.63 (1990).

24. Amanda Lewis, *The Evolving Process of Swapping Debt for Nature*, 10 *COLO. J. INT'L ENVTL. L. & POL'Y* 431, 436 (1999).

25. Knupfer, *supra* note 3, at 89.

26. E. Webb, *Debt for Nature Swaps: The Past, the Present and some Possibilities for the Future*, 11 *ENVTL & PLANNING L. J.* 222, 227 (1994).

27. Lewis, *supra* note 24, at 437.

28. Gibson & Curtis, *supra* note 1, at 357.

project was significantly under-funded.²⁹ Furthermore, Bolivia initially failed to enact national legislation designed to legally protect the Reserve.³⁰ This issue was made even more complex by the fact that the Beni region was one of Bolivia's principal areas for illegal cocaine processing.³¹ Bolivia did not fully comply with its responsibilities, and the debt-for-nature agreement did not contain mechanisms that were enforceable.³²

Despite the problems associated with the Bolivian transaction, several positive outcomes ensued from this pioneering arrangement. It confirmed that exchanging developing country debt, even where the amounts involved were relatively small, to advance conservation, environmental (and perhaps developmental) goals, was feasible, as long as due account was taken of relevant local conditions. Clearly, this last caveat is crucial, since each debt exchange needs to accommodate the recipient region's specific circumstances.

In addition, the exchange led to a positive spin-off - after Bolivia implemented the debt-for-nature exchange, the International Tropical Timber Organization ("ITTO")³³ provided it with a US\$1.26 million grant for continued forestry conservation.³⁴

B. Further 'First Generation' Debt-for-Nature Swaps

Early debt-for-nature transactions in Ecuador and Costa Rica were structured to address some of the concerns that arose in the Bolivian swap.

In 1987, a second debt-for-nature exchange was undertaken, with the WWF, The Nature Conservancy, and the Missouri Botanical Gardens

29. *Id.*

30. *Id.*

31. *Id.*

32. For more detailed discussion on the non-enforceable character of many of the early debt exchange transactions, see Tamara J. Hrynik, *Debt-for-Nature Swaps: Effective but not Enforceable*, 22 CASE W. RES. J. INT'L L. 141 (1990). The issue of enforceability is of greater significance when developed country "public funds," such as United States taxpayers' dollars, are involved. See Rosanne Model, *Debt-for-Nature Swaps: Environmental Investments Using Taxpayer Funds Without Adequate Remedies for Expropriation*, 45 U. MIAMI L. REV. 1195, 1203 (1991).

33. The ITTO is an international organization that "encourages the development of forestry alternatives that can be replicated in other countries." SEE CONSERVATION INTERNATIONAL FOUNDATION, *THE DEBT-FOR-NATURE EXCHANGE: A TOOL FOR INTERNATIONAL CONSERVATION*, 14 n.4 (1991).

34. Gibson & Schrenk, *supra* note 19, at 9. However, this forest management plan was difficult to implement, due to conflicts of interest between various groups and the lack of interest in reforestation demonstrated by the timber companies. See *id.* at 9 n.32.

purchasing US\$10 million of Ecuador's external debt for US\$1.5 million.³⁵ The funds were then assigned to a private Ecuadorian conservation group, *Fundacion Natura* ("FN").³⁶ Upon conversion, the debt was exchanged at full face value into local currency bonds in FN's favor.³⁷ The principal amount funded FN's establishment³⁸ and an endowment fund to support its general activities.³⁹ FN uses the interest generated by the bonds to undertake a diverse range of environmental projects to protect Ecuadorian national parks and reserves.⁴⁰

In contrast to the Bolivian transaction, in Ecuador the agreed conservation activities were undertaken by the local NGO without government participation. From an environmental funding viewpoint, the transaction was a success. Like many developing countries, Ecuador had found it difficult to devote significant financial resources to the environment.⁴¹ Even though the US\$10 million of debt represented only a fraction of Ecuador's total external debt, the resulting environmental funding was very significant in the circumstances. Interest payments in the first year alone doubled Ecuador's entire budget for national parks.⁴²

Through the use of an endowment fund, within Ecuador any perception of a loss of sovereignty was far less, as the range of projects was selected with local input as opposed to the entire transaction being for the preservation of one area of a country designated important by a foreign conservation group.

In 1987, the Costa Rican "Debt-for-Conservation" agreement followed a structure similar to that utilized in the Ecuadorian swap.⁴³ Within three years, in excess of US\$70 million of Costa Rica's external debt was swapped into local currency bonds (equivalent to US\$36 million) through the

35. Catherine A. O'Neill & Cass R. Sunstein, *Economics and the Environment: Trading Debt and Technology for Nature*, 17 COLUM. J. ENVTL. L. 93, 108 (1992).

36. Lewis, *supra* note 24, at 437.

37. The local currency of Ecuador at the time was the sucre. However, in 1999, Ecuador changed its local currency into U.S. dollars as part of an extensive restructuring of its financial system. See Larry Rohter, *As U.S. Military Settles In, Some in Ecuador Have Doubts*, N.Y. TIMES, Dec. 31, 2000. See also *Divided About the Dollar*, THE ECONOMIST, Jan. 4, 2001, at 36.

38. Lewis, *supra* note 24, at 437.

39. Gibson & Curtis, *supra* note 1, at 361.

40. Allegra G. Biggs, *Nibbling Away at the Debt Crisis: Debt-for-Nature Swaps*, 10 ANN. REV. BANKING L. 429, 456 (1991).

41. Ronny J. Halperin, *Revenue Ruling 87-124: Treasuries' Flawed Interpretation of Debt-for-Nature Swaps*, 43 U. MIAMI L. REV. 721 (1989).

42. Gibson & Curtis, *supra* note 1, at 360.

43. Lewis, *supra* note 24, at 437.

implementation of four debt exchanges.⁴⁴

Under debt exchange agreements in 1987 and 1998,⁴⁵ US\$5.4 million of Costa Rica's debt was purchased in the international secondary market for US\$918,000, funded by the WWF and donations to the Costa Rican National Parks Foundation from a variety of other NGOs.⁴⁶ The debt was converted at seventy-five percent of face value into medium-term local currency bonds,⁴⁷ with an average annual interest rate of 25%.⁴⁸ Interest income was used to establish a fund for conservation projects, including the Guanacaste National Park project, with title to land purchased reverting to the government only after the park was fully completed and endowed.⁴⁹

III. 'Second Generation' Debt-for-Nature Exchanges

The success of some "first generation" transactions, coupled with the growing international awareness of the relationship between the environment and development, opened the way for a new form of debt exchange involving official debt rather than commercial bank debt.⁵⁰ These transactions were on a bilateral government-to-government basis, with the developed country donor governments playing a central role. This form of debt exchange reflected a convergence of interests between the respective governments.⁵¹

The advent of government-to-government agreements was an important development in the evolution of the debt exchange mechanism, because it allowed for the exchange of larger amounts of debt. This was facilitated in part by the introduction of a debt swap clause by the Paris Club in 1991, through which bilateral debt was deemed as eligible to be exchanged and debt exchange programs for the conversion of Official

44. Two of these transactions were "second generation" debt exchange transactions.

45. Costa Rican Debt-for-Nature Agreement, Oct. 27, 1987, between the Costa Rican Central Bank, the Ministry of Natural Resources, Energy and Mines, the Costa Rican Cooperative Bank RL, and Fundacion de Parques Nacionales (The Costa Rican National Parks Foundation, a Costa Rican NGO): Gibson & Curtis, *supra* note 1, at 366 n.172.

46. These included the Nature Conservancy, *Asociacion Ecologica La Pacifica*, Pew Charitable Fund, MacArthur Foundation, J.S. Noyes Foundation, Swedish Society for the Conservation of Nature, W. Alton Jones Foundation, and Organization for Tropical Studies and Conservation International. *See id.* at 369 n.187.

47. These bonds were structured to mature after five years and nine months. *See* Gibson & Curtis, *supra* note 1, at 367.

48. *Id.*

49. Alagiri, *supra* note 17, at 496.

50. Lewis, *supra* note 24, at 439.

51. von Moltke, *supra* note 5, at 983.

Development Assistance were approved.⁵²

The expansion of debt exchanges to include official debt pushed the concerns of enforceability, political viability, and transparency to the core. Governments needed to consider the potential for political fallout from a failure to satisfactorily implement an agreement.⁵³ These government-to-government transactions became known as “second generation”⁵⁴ debt exchanges.

A. Costa Rica (1989) - ‘Debt-for-Conservation’ and ‘Debt-for-Industry’

Costa Rica, with twelve percent of its land designated as national parks or protected biological reserves, represented a prime candidate for debt-for-nature swaps and benefited from early exchanges.⁵⁵ In the late 1980s, Costa Rica participated in six debt-for-nature agreements, which retired 6.5% of its national debt.⁵⁶ In January 1989, the Netherlands and Costa Rica agreed that the former would purchase US\$33 million of Costa Rican debt in the secondary debt market, to be converted into local currency four-year bonds, equivalent in value to US\$9.9 million.⁵⁷ Interest was to be calculated at the annual rate of 15%, and these bonds were held in a trust fund, administered by both governments, in order to fund projects in reforestation and forest management.⁵⁸

This was the first government-to-government debt-for-nature exchange, and was innovative for the inclusion within the agreement of enforcement measures. These measures enabled each government to retain control over the projects financed, both through the requirement that both countries sign every project agreed to and by virtue of their ongoing ability to inspect projects and, if appropriate, to suspend finance for non-complying projects.⁵⁹ The agreement, however, did not go so far as to

52. Melissa Moye, *Overview of Debt Conversion*, 10 (Debt Relief International Ltd., 2001).

53. Sadler, *supra* note 18, at 335.

54. For example, see von Moltke, *supra* note 5, and Sher, *supra* note 6.

55. Brijesh Thapa, *The Relationship Between Debt-for-Nature Swaps and Protected Area Tourism: A Plausible Strategy for Developing Countries*, 15(2) USDA Forest Service Proceedings 268, 269 (2000).

56. Sean Michael Neal, *Bringing Developing Nations on Board the Climate Change Protocol: Using Debt-for-Nature Swaps to Implement the Clean Development Mechanism*, 11 GEO. INT'L ENVTL L. REV. 163, 172 (1998).

57. Agreement on Financial Cooperation in order to Support Forest Development, January 1989, in Sher, *supra* note 6, at 170.

58. Karel van Kesteren, *The Use of Aid Money for Debt Reduction: A View from Inside*, 6 J. INT'L DEV. 241, 243 (1994).

59. Lewis, *supra* note 24, at 442.

include a dispute resolution mechanism.⁶⁰

Another oversight of the agreement was the failure to provide for any role for NGOs in the selection of projects or with respect to governance.⁶¹ While the value of the debt exchanged was not large, through the creation of a trust fund, interest continued to accrue, which provided an ongoing source of conservation finance. The interest generated was in itself greater than the total annual Costa Rican park service budget.⁶²

In the same year, Sweden purchased about US\$28 million of Costa Rica's external debt for US\$3.5 million and donated it to Costa Rica's National Parks Foundation. Upon conversion, four-year bonds were created paying annual interest at a rate of 15%, which went into an endowment for research, environmental education, park management, and land acquisition.⁶³ The primary focus was to fund sustainable management of tropical forests in the Guanacaste province.⁶⁴

B. Poland (1991) - 'Debt-for-Democracy'

The early 1990s saw the debt exchange mechanism developed further to apply to much larger amounts of a developing country's external debt. In March 1991, seven major industrialized countries agreed to forgive half of Poland's US\$33-billion debt.⁶⁵ In addition some Paris Club countries agreed to channel interest payments and principal on some of the remaining debt into a Polish EcoFund to finance projects aimed at halting environmental damage. The Paris Club rescheduling had authorized members to sell their debt for exchanges involving local currency funding. In total, US\$473 million in local currency was invested in the EcoFund; the United States was the largest single donor, contributing US\$367 million for EcoFund projects.⁶⁶

These actions were intended to show support for the democratic and economic reforms instituted in Poland following the introduction of a post-Communist government.⁶⁷ Poland was suffering from severe economic

60. Sher, *supra* note 6, at 171.

61. *Id.* at 171-72.

62. Thapa, *supra* note 55, at 269.

63. The Guanacaste National Park Project Endowment: Gibson & Curtis, *supra* note 1, at 370.

64. Neal, *supra* note 56, at 172.

65. The Paris Club consists of the major creditors of a country seeking a rescheduling of its debt. It is named after its usual meeting place, and was first "formed" in 1956. It has no fixed membership, officers or permanent administrative staff. See Ross P. Buckley, *Rescheduling as the Groundwork for Secondary Markets in Sovereign Debt*, 26:2 DENV. J. INT'L L. & POL'Y 299, 300 n.9 (1998); and Lewis, *supra* note 24, at 443.

66. Pervaze A. Sheikh, *Debt-for-Nature Initiatives and the Tropical Forest Conservation Act: Status and Implementation*, CRS Report for Congress RL31286, CRS-5 (Oct. 11, 2006).

67. Gibson & Schrenk, *supra* note 19, at 66.

stagnation which, coupled with its unsustainable debt burden, had pushed it to the brink of insolvency.⁶⁸ Furthermore, Poland was highly polluted.⁶⁹ To reduce the “transboundary” effects of its pollution on neighboring countries, the Paris Club Agreement was made conditional upon the implementation of environmental cleanup programs and anti-pollution measures in Poland.

The EcoFund provides grants to approved conservation projects. Projects approved have been in the areas of transboundary air pollution, climate change, biological diversity and a cleanup of the Baltic Sea.⁷⁰ Between 1992 and 2007, the EcoFund financed 1,500 programs. The financing agreements typically provided for annual payments until 2010.⁷¹

The successful near-completion of this program demonstrates the adaptability of the exchange mechanism and its ability to be applied to significant amounts of debt in order to facilitate social and economic development. The Polish debt-for-democracy exchange is the largest debt-for-nature exchange to date.⁷²

C. Bulgaria

Following the example of Poland, Bulgaria was the second Eastern European country to participate in a debt-for-nature exchange. In 1995, Switzerland and Bulgaria signed a debt-for-nature exchange of 20 million Swiss francs, with the stipulation that the equivalent amount in local currency would be invested in environmental protection and clean up in Bulgaria.⁷³ The swap amounted to twenty-three percent of Bulgaria’s external debt owed to Switzerland, and the National Trust EcoFund (“NTEF”) was established to administer the funds.⁷⁴ The NTEF has four priority areas: cleanup of past pollution, reduction of air pollution, clean water protection, and preservation of biodiversity.⁷⁵ The fund’s objective is “the management

68. D. H. Cole, *Cleaning Up Krakow: Poland's Ecological Crisis and the Political Economy of International Environmental Assistance*, 2 COLO. J. INT'L ENVTL. L. & POL'Y 205, 217 (1991).

69. At the time Poland had the fourth largest external debt in the world: *Id.* at 217.

70. Org. for Econ. Co-operation and Dev. (OECD), *Lessons Learnt from Experience with Debt-for-Environment Swaps in Economies in Transition*, 5 (2007), <http://www.oecd.org/dataoecd/49/28/39352290.pdf> (hereinafter OECD (2007)).

71. Environmental Technologies Action Plan, Polish EcoFund Offers Template for Eco-Innovation Funding, http://ec.europa.eu/environment/etap/inaction/functions/New_Services/225_en.html (last visited Aug. 1, 2009).

72. OECD (2007), *supra* note 70, at 26.

73. Thapa, *supra* note 55, 271-2.

74. OECD, *Debt-for-Environment Swap in Georgia: Pre-feasibility Study and Institutional Options* 44 (2006), <http://www.oecd.org/dataoecd/8/56/35178696.pdf> (hereinafter OECD (2006)).

75. National Trust Eco Fund, <http://www.ecofund-bg.org/NDEF/index.php?pageid=1&lng=en> (last visited Aug. 1, 2009).

of means provided under debt-for-environment and debt-for-nature swap agreements” and other environmental financing.⁷⁶

The NTEF only plays a co-financing role in environmental projects.⁷⁷ By 2006, seventy-two projects had been financed by the NTEF.⁷⁸ Projects included hazardous waste and substances disposal, funding of waste treatment plants, and the management and development of infrastructure in protected areas.⁷⁹ While the NTEF was established with the revenue generated by the debt swap, it has since expanded its financing base. In a 2003 assessment, its strength was attributed to its role in securing co-financing from other international sources, using the publicity created by the debt-for-nature swap as a platform to seek further contributions.⁸⁰ The political independence and stable revenue provided by the debt swap were found to be important factors in the NTEF’s success.⁸¹

The Polish and Bulgarian debt-for-nature swaps provide good examples of a structure to allow for the transparent administration of a debt-for-nature swap using an environmental fund. The OECD notes that the Bulgarian EcoFund has proven to be a model of good governance “known for its rigorous project selection procedures and transparent decision-making.”⁸²

Moreover, creating an environment fund establishes a long-term financing mechanism.⁸³ The strength of such funds lies in their organized and enduring structure and their independence from government.⁸⁴ The creation of environmental funds has provided stability and direction to conservation policies in developing countries.⁸⁵

The Peruvian Trust Fund for National Parks and Protected Areas (“PROFONANPE”) is a similar environmental fund, which finances

76. Patrick Francis et al., *Review and Assessment of the Bulgarian National Trust EcoFund 6* (Sept. 2003), http://www.aequiconsult.com/images/NTEF_Review_2003_final_report.pdf.

77. *Id.* at 8.

78. National Trust EcoFund, *Projects*, <http://www.ecofund-bg.org/NDEF/index.php?pageid=9&lng=en> (last visited Aug. 1, 2009).

79. *Id.*

80. Francis et al., *supra* note 76, at 8.

81. *Id.* at 9.

82. OECD (2007), *supra* note 70, at 48.

83. David M. Leon, *Expanding the Scope of the Tropical Forest Conservation Act: Exchanging Foreign Debt for Sustainable Development*, 11 U. MIAMI INT’L & COMP. L. REV. 135, 147 (2003).

84. Marianne Guerin-McManus, *Conservation Trust Funds*, 20 UCLA J. ENVTL L. & POL’Y 2 (2001-2002).

85. Francis, Betts & Fiedler, *supra* note 76, at 6.

biodiversity, conservation, and sustainable development programs.⁸⁶ It was established by a contribution of US\$5.2 million from the Global Environmental Facility as an endowment fund. Since then it has been funded principally through debt-for-nature swaps and now has a capital of US\$95.9 million.⁸⁷ Debt-for-nature swaps have thus far been undertaken with Germany, Canada, Finland, and the United States.⁸⁸

D. United States Legislative Initiatives

The United States has played a pioneering role in debt-for-nature exchanges, as it was the first nation to implement legislative initiatives to facilitate such environmental financing. In 1989, the U.S. Congress passed the Global Environmental Protection Assistance Act (“GEPA”),⁸⁹ which established funding and support for additional USAID debt exchange activities.⁹⁰ The GEPA did not authorize the United States to participate in bilateral debt reduction (second generation exchanges), but instead authorized USAID to grant funds to environmental NGOs to purchase secondary market debt to be utilized in first generation debt-for-development exchanges.⁹¹ To minimize sovereignty concerns, the legislation prohibits the United States government from taking title to, or an interest in, land within a recipient country as a condition of the transaction.⁹² By 1998, USAID had provided US\$95 million to environmental NGOs for the acquisition of US\$146 million of external developing country debt, which was subsequently used in debt exchange transactions.⁹³

The 1990 Enterprise for the Americas Initiative Act (“EAI”) authorized the exchange of bilateral debt for environmental protection. Under the EAI, the United States agreed to reduce debt owed by eligible countries once they entered into an Environmental Framework Agreement (“EFA”) with the United States, which provides for the establishment of an Environmental

86. Alberto Paniagua V, *Bilateral Debt-for-Nature Swaps: The PROFONANPE Experience - Peru*, Paper for the Fifth World Parks Congress: Sustainable Finance Stream, 4 (Sept. 2003).

87. PROFONANPE’S Portfolio, www.profonanpe.org.pe/experiencia02_eng.html (last visited Aug. 2, 2009).

88. Paniagua, *supra* note 86, at 3.

89. Global Environmental Protection Assistance Act, 22 U.S.C. §§ 2281-2286 (1989). For a detailed description of the provisions of GEPA, *see* Scott Wilson, *The United States Agency for International Development as Catalyst for Debt for Nature Swaps*, 10 UCLA PAC. BASIN L.J. 260 (1991).

90. Wilson, *supra* note 89 at 275.

91. Post, *supra* note 18, at 1093.

92. *Id.* at 1094.

93. Lewis, *supra* note 24, at 444.

Trust Fund.⁹⁴ Principal payments on the reduced debt are then paid in U.S. dollars, and interest is to be paid in local currency into a local environment fund at concessionary rates.⁹⁵ The EAI introduced stringent eligibility preconditions for debtor nations to participate in such agreements, including requirements of a democratic government, respect for human rights, and economic reform programs.⁹⁶

By 1993, the United States had signed EFAs with Chile, El Salvador, Argentina, Bolivia, Colombia, Jamaica, Peru, and Uruguay, resulting in US\$875 million of debt being converted into the local currency equivalent of US\$154 million of environmental protection funding.⁹⁷ The program allowed for the funding of a wide range of activities, including conservation, education, agriculture, and sustainable development projects.⁹⁸

The next legislative initiative by the United States to promote debt-for-nature exchanges was the Tropical Forest Conservation Act of 1998 ("TFCA"). It is modeled on the EAI, but is not restricted to Latin American and Caribbean countries, and extends to any nation with a tropical forest of global or regional significance. The TFCA provides for "grant" funds whereby funds invested in Tropical Forest Funds, overseen by NGOs and community groups, are distributed through grants to implement chosen conservation projects.⁹⁹

The TFCA provides for three types of debt exchanges: debt reductions, debt buybacks, and debt swaps. Under the TFCA, the United States can establish partnerships with NGOs that are able to provide additional funding for debt reductions.¹⁰⁰ As of 2007, a range of NGOs, primarily the Nature Conservancy ("TNC"), CI, and the WWF, had contributed more than US\$9.6 million to transactions implemented under the TFCA.¹⁰¹ To date, fourteen TFCA agreements have been conducted in twelve countries, which will generate more than US\$188 million for tropical forest conservation.¹⁰² With the implementation of a second agreement with Peru, announced in

94. Sheikh, *supra* note 66, at CRS-7.

95. von Moltke, *supra* note 5, at 984-85.

96. Sheikh, *supra* note 66, at CRS-7.

97. *Id.* at CRS-8.

98. Douglas Logsdon, *Debt-for-Nature Evolves: The Enterprise for the Americas Initiative*, 3 COLO. J. INT'L ENVTL. L. & POL'Y 635, 647 (1992).

99. Leon, *supra* note 83, at 146.

100. Treasury International Programs, *Justification for Appropriations: FY2009 Budget Requests* 26 (2008), <http://www.treas.gov/press/releases/reports/completefy2009cpd.pdf> (last visited Aug. 1, 2009).

101. Eric Green, *U.S. Program Helps Save Tropical Forests, Cut Foreign Debt*, AMERICA.GOV (May 19, 2008).

102. These countries were Bangladesh, El Salvador, Belize, Peru, the Philippines, Panama, Colombia, Jamaica, Paraguay, Guatemala, Botswana, and Costa Rica. See Treasury International Programs, *supra* note 100, at 26.

late 2008, Peru will become the largest beneficiary, with more than US\$35 million generated for conservation activities.¹⁰³ Under TFCA agreements, an estimated 136 million acres of tropical forests have been preserved.¹⁰⁴ The success of the legislation has led to expressions of interest from Brazil, Peru, and Kenya to participate in the initiative.¹⁰⁵

IV. Recent Debt-for-Nature Exchanges

The range of extensive multilateral debt relief initiatives since 2000 has led to the continued utility of debt-for-nature exchanges being challenged. One commentator asked, “has the multilateral HIPC ended the era of bilateral debt-for-nature swaps?”¹⁰⁶ Support for, and the use of, debt-for-nature exchanges have, however, continued to grow, particularly as a tool for conservation finance in highly indebted nations that have failed to qualify for the HIPC initiative or the Multilateral Debt Relief Initiative (“MDRI”). Indeed, several international organizations and NGOs have continued to advocate for greater use of debt-for-nature exchanges in a wide range of countries across Africa, Asia, Latin America, and elsewhere.¹⁰⁷

The United Nations Economic Commission for Latin America and the Caribbean (“U.N. ECLAC”) in 2001 considered the debt exchange mechanism as “underutilized” for conservation purposes, and advocated the potential of debt exchanges to help limit deforestation, preserve other resources such as water and biodiversity, and promote clean energy.¹⁰⁸ The OECD has

103. Press Release, U.S. Department of the Treasury, Debt-for-Nature Agreement to Conserve Peru’s Tropical Forests (Oct. 21, 2008), available at <http://www.ustreas.gov/press/releases/hp1226.htm>.

104. Press Release, Rep. Mark Steven Kirk, Kirk Tropical Forest and Coral Conservation Act Passes the House (Oct. 9, 2007), available at http://www.house.gov/list/speech/il10_kirk/Kirk_Tropical_Forest.html.

105. Treasury International Programs, *supra* note 100, at 26.

106. Eugenio Gonzales, *Roles and Challenges for Foundations in Debt-for-Development Swaps* 13, (The Synergos Institute) (copy on file with second author).

107. Arturo López Ornat & Sira Jiménez-Caballero, *Sustainable Financing Sources for Protected Areas in the Mediterranean Region* 54, (2006); Alain Lambert, *Sustainable Financing for Environmental Projects in Africa: Some Ideas for Consideration*, UNEP, prepared for the 11th Regular Session of the African Ministerial Conference on the Environment, Brazzaville, Congo, 22-26 May, 2006; Agus Purnomo, *Debt Swap for Nature Opportunities in Indonesia* 5, prepared for KEHATI (Indonesian Biodiversity Foundation) (2004), http://www.funds.org.ar/deuxedu/biblioteca/5_estudios_mecanismos_de_conversion_de_deuda/debt_swap_nature_opportunities_indonesia_synergos2004.pdf; U.N. Econ. Comm’n for Latin America and the Caribbean (ECLAC), *Debt for Nature: A Swap Whose Time Has Gone?*, LC/MEX/L.497 (Nov. 6, 2001).

108. U.N. ECLAC, *id.* at 18.

endorsed the use of debt-for-nature exchanges as a conservation financing mechanism, stating that [a] debt-for-environment swap is among the very few mechanisms that can provide sustainable support for local economic development and at the same time mobilize domestic spending to protect purely public and common goods (such as biodiversity) or pure externalities (such as transboundary or global pollution) in low-income countries.¹⁰⁹

The successes of the debt-for-nature programs in Poland, Bulgaria, and elsewhere have encouraged the OECD to seek to implement such mechanisms in other nations.

The OECD has argued for the use of debt-for-nature exchanges in Eastern Europe, and in the Caucasus and Central Asia, given that of all the nations in these regions, only the Kyrgyz Republic is eligible for debt relief under multilateral initiatives.¹¹⁰ The OECD has emphasized the importance of “[a] thorough and rigorous analysis of the debt portfolio” before engaging in debt-for-nature exchanges.¹¹¹ In international rescheduling agreements, both the Kyrgyz Republic and Georgia have included debt-exchange provisions in the rescheduling of their Paris Club debt, and both governments have established inter-ministerial working groups on debt-for-environment exchanges.¹¹²

The OECD argues that the best results are achieved through Paris Club negotiations, and has conducted feasibility studies of the Kyrgyz Republic and Georgia in order to examine the possibility and potential of such debt exchanges.¹¹³ Despite the high hopes of the Kyrgyz government, the feasibility study revealed limited potential. Most of its foreign debt is multilateral,¹¹⁴ and of the small proportion of bilateral debt, the only creditors to have engaged in exchanges are Germany and France (the other main creditors were Russia and Turkey, which have not undertaken any debt exchanges or thus far demonstrated a willingness to do so). Priority projects that have been identified include biogas production from animal waste and the prevention of irreversible loss of biodiversity. Germany was identified as

109. OECD (2007), *supra* note 70, at 21.

110. *Id.* at 13. In 2002, the CIS 7 initiative was launched as a collaborative effort to facilitate economic growth and poverty reduction for the Kyrgyz Republic, Moldova, Armenia, Azerbaijan, Tajikistan, Uzbekistan, and Georgia, but this initiative has not resulted in debt forgiveness. See Int’l Monetary Fund (IMF) & World Bank, *A New Initiative for the CIS 7*, (Feb. 4, 2002).

111. OECD (2007), *supra* note 70, at 54.

112. OECD, *Facilitating Policy Dialogue on Opportunities and Risks of Debt-for-Environment Swaps*, http://www.oecd.org/document/7/0,3343,en_2649_34335_35165319_1_1_1_1,00.html (last visited Aug. 1, 2009).

113. OECD (2007), *supra* note 70, at 26.

114. Until the establishment of the MDRI, there was a reluctance to forgo any multilateral debt. *Id.* at 14.

the most likely creditor with which to pursue a debt-for-nature exchange, and the Kyrgyz government is currently attempting to secure such an agreement.¹¹⁵

Georgia has sought to utilize the debt-exchange mechanism since 2000, when it asked the World Bank for assistance in negotiating debt-for-environment schemes with creditor governments. It sought similar assistance from the OECD in 2001.¹¹⁶

Following the feasibility study of debt-for-environment exchanges for Georgia, the OECD recommended that “Georgia pursue a comprehensive debt-for-environment swap scheme to take advantage of the synergies that exist between environmental and development objectives.”¹¹⁷ In its assessment, the OECD noted a number of promising project sectors, including reducing emissions of greenhouse gases, reducing pollution of international waters, protecting biological diversity, and facilitating access for the poor to safe water and sanitation services.¹¹⁸

The report did, however, note that “[p]reparation for the transactions and financial transfers of a debt-for-environment swap scheme is not going to be short, easy and cheap.”¹¹⁹ This has proven to be correct, as Georgia is yet to finalize an agreement for a debt-for-nature exchange with any creditor nation.¹²⁰

In terms of potential negative impacts of debt-for-nature transactions, the OECD has highlighted the threats of inflationary impact, credit-rating downgrades, and inefficient public administration,¹²¹ but at the same time has noted that the potential benefits of such exchanges are far greater.¹²² The United Nations Environmental Program (“UNEP”) is also of the view that debt-for-nature transactions are potentially highly useful.

Alain Lambert has argued there is a dire need to expand innovative funding mechanisms for environmental projects as “[t]he traditional ‘project approach’ does not work anymore.”¹²³ The innovative funding mechanisms he suggests could more broadly tackle environmental concerns in Africa and include environmental trust funds, payment schemes for environmental services, debt-for-nature exchanges, and carbon-offset programs. He considered that “Debt-for-Sustainable Development swaps will never be the

115. *Id.* at 30.

116. OECD (2006), *supra* note 74, at 16.

117. *Id.* at 26.

118. *Id.* at 10.

119. *Id.* at 58.

120. *Id.* at 9.

121. OECD (2007), *supra* note 70, at 18.

122. *Id.* at 17-18.

123. Lambert, *supra* note 107, at 3.

single definitive solution to the problem but its much more extensive use could certainly be part of a more global solution.”¹²⁴

Lambert provided three reasons for the failure of traditional project funding for environmental conservation. These were: 1. The failure to provide long-term financing, with conservation activities largely ceasing at the conclusion of a project; 2. Too great a dependency on donor funding; and 3. The continuing tendency to view the environment and development as separate issues.¹²⁵

The use of debt-for-nature exchanges in the past decade highlights their ability to address the shortfalls in other conservation mechanisms and foster long-term financing and an integrated approach to the environment. Examples of this are set out below.

A. The Madagascar Foundation

Recent debt-for-nature exchanges undertaken by Madagascar demonstrate the success of trust funds as a means to secure long-term financing for environmental projects. In 2000, Madagascar was declared eligible for debt relief under the HIPC initiative. In the preparation of its Poverty Reduction Strategy Paper, the environment was “considered to be a crosscutting theme in poverty reduction strategies.”¹²⁶ In the same year, the Malagasy government established the Sustainable Financing Commission to design a sustainable financing strategy for Madagascar’s third Environmental Program.¹²⁷ Environmental priorities included environmental impact evaluations for all projects, sustainable management of coastal and marine ecosystems, and sustainable financing for protected areas.¹²⁸

In 2003, Germany undertook a debt-for-nature swap with Madagascar in relation to debt that was excluded from HIPC treatment.¹²⁹ Germany agreed to cancel €23.3 million of debt in exchange for the Malagasy government paying €13.8 million into a counterpart fund to be disbursed to finance environmental projects over twenty years.¹³⁰ The agreement was contingent on the establishment of a Madagascar Foundation for Protected Areas and Biodiversity, with a management structure acceptable to the

124. *Id.* at 20.

125. *Id.* at 3.

126. Melissa Moye & Jean-Paul Paddack, *Madagascar’s Experience with Swapping Debt for the Environment* 8, Background Paper for the Vth World Parks Conference, Durban, South Africa, (WWF, 2003).

127. *Id.* at 7.

128. *Id.* at 8.

129. Germany has long been a leader in debt-for-nature exchanges. See Ross P. Buckley, *Debt-for-Development Exchanges: A Potentially Innovative Response to the Global Financial Crisis*, UNSW L.J. (forthcoming 2009).

130. Moye & Paddack, *supra* note 126, at 9.

German government.¹³¹ The Madagascar Foundation was established in 2005. The debt-for-nature exchange reflected the priorities established in Madagascar's third Environmental Program.¹³²

The Madagascar Foundation has continued to be funded through debt-for-nature exchanges. Most recently, in 2008, France announced a debt-for-nature transaction with Madagascar, which will contribute US\$20 million in funding. This is the largest debt-for-nature exchange in Madagascar's history and has brought the Foundation's total endowment to over US\$50 million.¹³³

B. Millennium Development Goals, the Paris Declaration and Debt-for-Nature

The OECD argues that debt-for-nature exchanges should seek to facilitate the achievement of water and environmental Millennium Development Goals ("MDG").¹³⁴ The seventh MDG seeks to promote "environmental stability" and takes a broad view of environmental imperatives, including the integration of principles of sustainable development into country policies and programs, the reduction of biodiversity loss, the promotion of sustainable access to safe drinking water and basic sanitation by 2015, and the achievement of significant improvements in the lives of slum dwellers by 2020.¹³⁵

These targets have been directly incorporated into more recent debt-for-nature agreements. For example, recent Italian exchanges use the MDGs to provide a framework for debt-for-nature exchanges.¹³⁶

In 2000, Italy enacted law 209/2000, a "Measure to reduce external debt of lower-income and highly indebted countries." This law enabled debt swaps to be undertaken with countries with a commitment to human rights, which have renounced war and evidenced a commitment to social and human development. Under this law, funds liberated by a debt conversion can be utilized in four specified sectors: agriculture, health, education, and infrastructure.¹³⁷ To date, the largest debt swap agreement that Italy has

131. *Id.*

132. *Id.* at 11.

133. WWF, Conservation Finance - Debt-for-Nature Swaps, <http://www.worldwildlife.org/what/howwedoit/conservationfinance/debtforatureswaps.html> (last visited Aug. 1, 2009).

134. OECD (2007), *supra* note 70, at 34.

135. *See* United Nations Millennium Development Goals, www.un.org/millenniumgoals/ (last visited Aug. 1, 2009).

136. For a more detailed look at recent debt-for-development exchanges, *see* Buckley, *supra* note 129.

137. Legge 209/2000, Gazzetta Ufficiale n.175, 28 luglio 2000, *Misure per la riduzione del debito estero dei Paesi a piu basso reddito e maggiormente indebitati*, art. 3(3) (Italy).

entered into was with Egypt in 2001. This debt-for-development agreement was worth US\$149 million and conducted over five years. The debt swap focused on three areas: human development, poverty alleviation, and environmental protection.

Two project clusters of the Italy-Egyptian Debt Swap Agreements (“IEDS”) were in line with the seventh MDG. These were to increase access to safe drinking water and to “integrate principles of sustainable development” into national projects. Under these targets, dams were constructed and pilot programs undertaken to facilitate treatment of agricultural drainage using low cost technology. Research was also undertaken into the establishment of desalination plants.¹³⁸ In order to foster principles of sustainable development, projects undertaken ranged from environmentally sustainable tourism to measures to decrease industrial pollution. These included the Dolphin Habitat Conservation Project, relocation of tanneries to outside Cairo to contribute to cleaner industrial production, and the training of neighborhood leaders in environmental awareness. Solid waste management and marine biodiversity projects were also funded.¹³⁹

Following the success of the IEDS, in 2006 Italy signed a debt-for-development swap with Kenya for €44 million, focused on environmental projects. Water and irrigation were priority sectors in light of the National Water Services Strategy 2007-15, which aims to upgrade water systems in rural areas.¹⁴⁰ The upgrading of the Korogocho slum, another purpose of the exchange, was also aligned with the MDGs and the National Slum Upgrading Programme.

The debt-for-development exchanges undertaken by Italy, focused on environmental projects, demonstrate how debt exchanges can be used effectively and sustainably to address environmental challenges. They also exhibit how environmental concerns can be viewed as part of broader development concerns, and not as merely ancillary to poverty alleviation.

The second development in these debt-for-nature exchanges is the way Italy has sought to implement the agreements under the dictates of the Paris Declaration on Aid Effectiveness. In 2005, the Paris Declaration established five key principles for overseas development assistance:

138. Samir Radwan et al., *Partners for Development: The Experience of the Italian-Egyptian Debt Swap Program (2001-08)* 39 (2008), available at <http://www.utlcairo.org/stampa/Final%20study%20IEDS.pdf>.

139. *Id.* at 36.

140. Kenya-Italy Debt-for-Dev. Program (KIDDP), Sectors of Intervention, <http://www.kiddp.org/> (last visited Aug. 1, 2009).

ownership, alignment, harmonization, results, and mutual accountability.¹⁴¹ The insistence on conditions by creditor nations, known as “conditionality,” is no longer viewed as appropriate in an international aid program. Despite the absence of conditions, the principles of the Paris Declaration have provided a coherent framework by which debt-for-nature transactions can promote, rather than undermine, good governance in debtor nations.

In a final report on the IEDS in 2008, the criteria against which the implementation of programs was assessed were their alignment with the MDGs and the principles of the Paris Declaration.¹⁴² The report concluded that debt exchanges were able to conform to the two frameworks.¹⁴³ In line with the Paris Declaration, projects in the IEDS were mainly selected by the Egyptian government in accordance with national priorities. The majority of projects were implemented by Egyptian government entities, and both nations were concurrently responsible for monitoring the implementation of the agreement.¹⁴⁴

C. Indonesia, Debt-for-Nature and the Clean Development Mechanism

Although it was initially resistant to the idea of debt exchanges, since 2000 the government of Indonesia has expressed interest in participating in exchanges with other nations. In a 1998 feasibility assessment, USAID concluded that “[d]ebt-for-nature swaps are likely to be feasible in Indonesia and should be actively pursued as a debt relief and conservation funding mechanism.”¹⁴⁵

Indonesia was seen as a prime candidate for debt-for-nature exchanges, due to the ready availability of restructured debt and because the rate of deforestation in Indonesia was alarmingly high.¹⁴⁶ The East Asian economic crisis had a substantial impact upon conservation funding in Indonesia, with the budget for national parks management slashed by thirty percent in 1998-99 in nominal terms (a 60 percent reduction in real terms).¹⁴⁷

141. OECD, *The Paris Declaration and Accra Agenda for Action*, http://www.oecd.org/document/18/0,3343,en_2649_323639835401554_1_1_1_1,00.html (last visited Aug. 1, 2009).

142. Radwan, et al., *supra* note 138, at 19.

143. *Id.* at 24.

144. *Id.* at 29-30.

145. *Assessment of the Feasibility: Debt-for-Nature Swaps in Indonesia* vi, prepared for the U.S. Agency for International Development (Dec. 14, 1998).

146. Between 2000-2005, Indonesia had the fastest rate of deforestation worldwide. See Tony Hotland, *RI-Germany Eye Cooperation Around Renewable Energy Sources*, THE JAKARTA POST, Feb. 28, 2008, at 3.

147. *Assessment of the Feasibility: Debt-for-Nature Swaps in Indonesia*, *supra* note 145, at 1.

Recognizing that the environment was ripe for debt-for-nature exchanges, WWF, CI, TNC, and KEHATI (the Indonesian Biodiversity Foundation) created a Joint Steering Committee to explore and coordinate the possibilities for debt-for-nature exchanges and promote them to the government.¹⁴⁸ KEHATI organized a seminar on debt-for-nature swaps in October 2004, where papers presented by the Indonesian Central Bank and the National Planning Agency asserted that about US\$800 million worth of the country's debt might be eligible for exchange.¹⁴⁹

Following debt-for-education exchanges with Germany in 2002, Germany and Indonesia entered into an innovative debt-for-nature exchange in September 2006 under which €6.25 million has been invested to increase environmental quality through targeted funding for small and micro businesses.¹⁵⁰ In 2009, Indonesia and the United States are expected to finalize a US\$19.6 million debt-for-nature agreement,¹⁵¹ and Indonesia is currently in the final stages of negotiating a further €20 million debt-for-nature exchange with Germany.¹⁵²

While enthusiasm for debt-for-nature exchanges has not been uniform within Indonesia,¹⁵³ there has been continuing advocacy for a more widespread use of the mechanism and greater dialogue with creditor nations. Most recently, the Borneo Orangutan Survival Foundation ("BOS") has sought to implement a debt-for-nature exchange in conjunction with the Clean Development Mechanism.

In 1997, the Indonesian government saved a 364,000-hectare area in Central Kalimantan from becoming an oil palm plantation. The area is home to an estimated 3,000 wild orangutans. The Indonesian government had authorized the BOS to negotiate with the World Bank for the debt-for-nature exchange to raise funds for ongoing protection of this area.¹⁵⁴ The founder of the BOS, Willie Smits, had envisioned that the area could be offered to become a new permanent reserve, but under the condition that a part of Indonesia's debt be forgiven, with the area then managed not by the

148. Purnomo, *supra* note 107, at 5.

149. Gonzales, *supra* note 104, at 13.

150. Press Release, Republic of Indonesia, Debt-for-Nature Swap Program on Environmental Investment for Micro and Small Business (Oct. 3, 2006), *available at* <http://www.indonesia.go.id/index.php/content/view/2280/709/>.

151. *Government Secures Debt Swap with Italy*, THE JAKARTA POST, Jan. 10, 2009.

152. *Id.*

153. Indonesian environmental NGO WHALI (Indonesia Forum for the Environment and Friends of the Earth Indonesia) has expressed reservations about the use of debt-for-nature exchanges, due to a perceived exclusion of indigenous populations from the projects. Interview with Feri Irawan (Oct. 4, 2007), *available at* <http://home.snafu.de/watchin/redamazon12.11.07.htm> (last visited Aug. 1, 2009).

154. Orangutan Conservancy, *Mawas - BOSF: A New Habitat Protection Project*, <http://www.orangutan.net/projects/mawas> (last visited Aug. 1, 2009).

Indonesian government but by the BOS.¹⁵⁵

The innovative nature of his project, however, was that Smits conceived of the original conservation project being established under a bilateral debt-for-nature agreement and the continued financing being funded through the Clean Development Mechanism ("CDM"), whereby preservation of peat swamps could create a sustainable income through a voluntary carbon offset program.¹⁵⁶

There were some initial difficulties in such a project. For example, Indonesia had, prior to 2004, not ratified the Kyoto Protocol to the United Nations Framework Convention on Climate Change¹⁵⁷ and therefore was not eligible to market carbon credits. To overcome this obstacle, Smits reached an agreement with Shell Canada, which has a voluntary carbon credit scheme.¹⁵⁸ With ratification of the Kyoto Protocol, the possibilities of this scheme widened, with expressions of interest from the Netherlands and Germany to participate in carbon trading for the purpose.¹⁵⁹ This would be the first such debt exchange to take place within the framework of the CDM. While negotiations for this initiative appeared promising, no concrete agreements have yet been signed.¹⁶⁰

Progress has been slow with debt-for-nature exchanges in Indonesia, despite a strong commitment by environmental NGOs to be involved in innovative approaches. Smits has noted the difficulty in engaging creditor support for debt exchanges, due to systemic corruption within Indonesia.¹⁶¹ The International NGO Forum on Indonesian Development has cited disappointment with Indonesia's most recent collaborative initiative on international aid, the Jakarta Commitment, which has failed to articulate an obligation to eradicate corruption. The Jakarta Commitment is an inter-governmental initiative for the management of foreign aid involving twenty-

155. ABC Radio National, *The Science Show*: 3 July 2004 - Orangutan - Person of the Forest, <http://www.abc.net.au/rn/science/ss/stories/s1127766.htm>.

156. *Id.* The possibility of utilizing the CDM for peat swamps in the Central Kalimantan has also been recognized by the Institute for Environmental Security. *See, for example*, JEANNA HYDE HECKER, PROMOTING ENVIRONMENTAL SECURITY AND POVERTY ALLEVIATION IN THE PEAT SWAMPS OF CENTRAL KALIMANTAN, INDONESIA (Oct. 2005), http://www.envirosecurity.org/espa/PDF/IES_ESA_CS_Kalimantan_Case_Study.pdf.

157. Kyoto Protocol to the United Nations Framework Convention on Climate Change, *available at* http://unfccc.int/essential_background/kyoto_protocol/items/1678.php (last visited Sept. 20, 2009).

158. ABC Radio National, *supra* note 155.

159. Annie Lawson, *A Race Against Time*, THE AGE, Nov. 7, 2004, *available at* <http://www.theage.com.au/articles/2004/11/06/1099547432198.html> (last visited Sept. 20, 2009).

160. BOS, *Do the orangutans of Mawas hold a key to helping prevent the effects of global warming in the Asia/Pacific area?*, <http://www.orangutans.com.au/Orangutans-Survival-Information/Mawas-Reserve.aspx> (last visited Aug. 2, 2009).

161. ABC Radio National, *supra* note 155.

two donor countries and multilateral institutions.¹⁶² The Commitment has, however, failed to seek diplomatic debt reduction and debt relief. A greater acceptance of debt restructuring and an increased commitment to wiping out corruption may be required before debt-for-nature exchanges can begin to fulfill their potential within Indonesia.

V. Conclusion

This article has charted the evolution of a relatively straightforward mechanism, the debt-for-nature exchange. Originally conceived and implemented for relatively modest purposes, the mechanism has disproved the doubts of those who suggested it was a financing technique with relatively limited capacities that had passed its use-by date. Despite some hiccups along the way, it seems that, much like standby letters of credit, the debt exchange mechanism has a flexibility and simplicity that allows it to be adapted for an increasing variety of purposes.

Indeed, as has been discussed, where there is sufficient political will and interest, the mechanism can involve very significant amounts of money and be used for historically groundbreaking purposes.

Yet, despite its advantages, the exchange mechanism is still underutilized, particularly when compared to the extent of more traditional funding of developing countries through development aid, and when compared to the extent of straight debt cancelation. This may be due to a number of factors: a misunderstanding of the purposes of the technique, an overblown fear that the technique cannot accommodate the needs of indigenous peoples, traditional notions of sovereignty, a failure in the past to implement appropriate enforcement and governance structures, and a shortage, particularly in developing countries, of the time, energy and expertise needed to negotiate and properly implement debt exchanges.

A particularly shocking comparison is to compare the typical size of debt-for-nature exchanges considered herein with the size of debt cancelations afforded by the United States to promote its national security interests, narrowly defined, and its geo-political interests. When the success of Poland's transition to democracy was seen as important for Eastern Europe in the early 1990s, the United States cancelled \$2.5 billion of its debt.¹⁶³ When Jordan's moderating influence in the Middle East was seen to matter, the United States cancelled \$700 million of its debt.¹⁶⁴ When Egypt's

162. Press Release, Int'l NGO Forum on Indonesian Dev. (INFID), *The "Jakarta Commitment": A Reincarnation of CGI and a "Commitment to Dependency"* (Feb. 2, 2009), available at <http://www.infid.org/newinfid/newsdet.php?pci=3813>.

163. Sheikh, *supra* note 64, at CRS-5.

164. James Fuller, *Debt for Nonproliferation: The Next Step in Threat Reduction*, ARMS CONTROL TODAY (Jan./Feb. 2002), available at http://www.armscontrol.org/act/2002_01-02/fullerjanfeb02.asp.

support of United States policy in the Middle East was particularly valued, the United States cancelled \$7 billion of its debt.¹⁶⁵ And when the United States was seeking to rebuild Iraq after the second Gulf war, the United States cancelled \$3.5 billion of its debt, for a nation with the world's second-largest oil reserves and thus the long-term capacity to repay the debt readily.¹⁶⁶

However, more recent developments are encouraging, and the embryonic steps that have been taken to incorporate the debt exchange process into the CDM regime under the Kyoto Protocol may represent a further opportunity to promote environmental and developmental progress through the use of a time-tested financing technique. Certainly these exchanges are a tool that should be used far more often, and on a much larger scale than have been the case to date as the world seeks to address the ever more complex environmental and developmental challenges of the twenty-first century.

165. *Id.*

166. Ross P. Buckley, *Iraqi Sovereign Debt and Its Curious Global Implications*, in *BEYOND THE IRAQ WAR: THE PROMISES, PITFALLS AND PERILS OF EXTERNAL INTERVENTIONISM*, 141, 143-45 (Michael Heazle & Iyanatul Islam eds., Edward Elgar Publishing Ltd. 2006).

* * *