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The bonding requirements for investment in Africa

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INTRODUCTION

Africa hosts the majority of the least developed countries (LDCs) with thirty four out of forty of them located there.[1] These are low income states that are "structurally disadvantaged in their development process" and are more unlikely than other poor countries to come out of poverty.[2] Foreign direct investments (FDI) are much sought after and play a critical role in the post-war reconstruction in countries like Angola. Generally, FDI is crucial for the development of the LDCs in terms of "export growth, technology and skills transfer, employment generation and poverty eradication".[3] In addition, "FDI is instrumental in the rapid and efficient cross-border transfer and adoption of best practice – ranging from technological, managerial, to environmental and social standards".[4] Historically, Western companies accounted for the majority of FDI in Africa and the investment was concentrated on areas such as mining and oil industries. In recent years, China has become a player in Africa. The Chinese official figure showed that its total investment in Africa had amounted to nine billion US dollars by 2010 and its investment now ranges from mining and construction to manufacturing and agriculture and to financing.[5] Apart from the predominant investment in oil exploration, Chinese firms were also engaged in construction and retail trade.[6] The trade between China and Africa reached 114.81 billion US dollars in the first eleven months of 2010.[7]As between China and Angola alone, the trade was about 25 billion US dollars in 2010, but crude oil took up almost all the imports from Angola.[8]

Some regard China's expansion in Africa as "neo-colonialism"; this implicates that China may act as the Western companies did inter alia by generating environmental degradation through exploitation of Africa's natural resources.[9] But many Africans do not share this view

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[1] STATISTICAL PROFILES OF THE LEAST DEVELOPED COUNTRIES, 2005 (UNCTAD/LDC/MISC/2005/3)

[2] Id.

[3] Fourth United Nations Conference on the Least Developed Countries Istanbul, Turkey, 9-13 May 2011, available at ldc4istanbul.org/uploads/IPoA.pdf

[4] Xiaolun Sun, How to Promote FDI? The Regulatory and Institutional Environment for Attracting FDI,

[5] *Zhang Xinyi*,Chinese investment in Africa cements friendly ties*, People's Daily Online,* February 15, 2011, http://english.peopledaily.com.cn/90001/90780/91421/7288802.html.

[6] ANGOLA AND CHINA, A Pragmatic Partnership Working Paper Presented at a CSIS Conference, "Prospects for Improving U.S.-China-Africa Cooperation," December 5, 2007, Indira Campos and Alex Vines Chatham House, London, March 2008

[7] David Smith and agencies, China says booming trade with Africa is transforming continent, Report from Beijing predicts even faster rate of growth, although critics warn of failure to recognise human rights abuses, The Guardian, 23 December 2010, http://www.guardian.co.uk/world/2010/dec/23/china-africa-trade-record-transform.

[8] Yan (ed), China pledges to help Angola in diversifying exports in bilateral trade, English.news.cn 2011-01-14 http://news.xinhuanet.com/english2010/china/2011-01/14/c_13689715.htm

[9] Michelle Chan-Fishel, Environmental Impact, Pambuzuka, Dec 19, 2006 http://www.ocnus.net/cgi-bin/exec/view.cgi?archive=106&num=27180&printer=1; Ian Taylor, China's environmental footprint in Africa, China Dialogue, February 02, 2007, http://www.chinadialogue.net/article/show/single/en/741 ("It is important not to identify China as the sole exploiter of Africa, or of being unique in its disregard for Africa's environment.

of China implementing "neo-colonialism" in Africa. As South African President Jacob Zuma argues, "China is there discussing with the brothers and sisters in Africa to create a mutually beneficial kind of relationship … different from former western colonialists [who simply took] things by force."[10] Others also blame China for detaching investment from human rights and making no efforts to oblige African countries to improve their human rights.[11] China, however, argues that "each country should be allowed their own definition of [human rights] and timetable for reaching them" and that "attempts by foreign nations to discuss democracy and human rights violate the rights of a sovereign country."[12]

As an emerging economy, China has developed its own way of government and business. Leaving aside its style of totalitarian government, China has its different business models and ways of doing business when contrasted with European and American businesses. Chinese businesses are, for example, less bureaucratic and may take immediate action and execute projects quickly.[13] This apparently makes business sense and fits the needs of some African countries for reconstruction. As the Sierra Leone ambassador to Beijing stated, "The Chinese are doing more than the G8 to make poverty history…If a G8 country had wanted to rebuild the stadium, we'd still be holding meetings! The Chinese just come and do it. They don't hold meetings about environmental impact assessment, human rights, bad governance and good governance. I'm not saying it's right, just that Chinese investment is succeeding because they don't set high benchmarks."[14]

However, as indicated by the Sierra Leone ambassador, this may also create a variety of problems. On the business side itself, one problem is that work may not be completed up to the satisfactory standard; for example, cracks appeared in the walls of a hospital only months after completion of construction, resulting in the abandonment of the compound.[15] Then what is particularly acute is the impact on environment. Chinese companies are not only engaged in mining, oil and other industries with high environment risks, but also undertake projects in remote regions, which burdens the ecologically fragile environment and aggravates the

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The history of western involvement in the continent is not a proud one on this score. Indeed, Chinese exploitation of Africa's resources pales into insignificance when compared to western activities both past and present.").

[10] As cited in David Smith and agencies, China says booming trade with Africa is transforming continent, Report from Beijing predicts even faster rate of growth, although critics warn of failure to recognise human rights abuses, The Guardian, 23 December 2010, http://www.guardian.co.uk/world/2010/dec/23/china-africa-trade-record-transform.

[11] Stephanie Hanson, China, Africa, and Oil, Council on Foreign Relations, June 6, 2008 http://www.cfr.org/china/china-africa-oil/p9557; Richard Spencer, China courts Africa's abusers of human rights, the Telegraph, 01 Nov 2006, http://www.telegraph.co.uk/news/worldnews/1532977/China-courts-Africas-abusers-of-human-rights.html ("China is scuppering attempts to improve standards of government and to punish countries like Sudan and Zimbabwe for their records of violent suppression of opposition by insisting on "value-free" involvement.");By coddling Guinea's dictator, China again mocks human rights in Africa, The Economist, Oct 15th 2009,http://www.economist.com/node/14664647 ("It seems that China's commercial march across Africa will continue unabated, however vile the human-rights record of the governments it seeks to befriend.")

[12] Stephanie Hanson, China, Africa, and Oil, Council on Foreign Relations, June 6, 2008 http://www.cfr.org/china/china-africa-oil/p9557.

[13] David Smith and Agencies

[14] Lindsey Hilsum (2005) 'We Love China', in Granta 92, 'The View from China'

[15] The Chinese in Africa Trying to pull together, Africans are asking whether China is making their lunch or eating it, The Economist, Apr 20th 2011, http://www.economist.com/node/18586448.

problems by construction of accesses.[16] Examples abound. A Chinese oil company polluted lakes in Sudan with spilled crude oil. [17] Chinese multinationals engaged in mining in Zimbabwe were "operating like *makorokoza* miners" ("a scornful term for illegal gold-panners").[18] Sinopec commenced oil prospering in Loango National Park in Gabon without the environmental impact study being approved by the Ministry of the Environment. The company was accused of creating "mass pollution, dynamiting areas of the park and carving roads through the forest".[19] Obviously, the potential threat to rare plants and animals would otherwise be tremendous but for the subsequent order to halt the production.[20] Unregulated mining activities have caused environmental damage in Congo and state-owned companies and private Chinese entrepreneurs, both being poor performers for pollution control back in China,[21] are found to be involved in mining and other activities.[22]China also exports its dam building capacity and know-how to Africa, [23] but the environmental impact back in China is already evident: flooding land and displacing residents, changing its ecosystem and destroying biodiversity.[24] It is no surprise and indeed credible enough that the $2.2 billion Gibe III dam on Ethiopia's Omo River due to be completed in 2013 will inflict disastrous impact on the habitat of birds and hippos and the Ghana's $729 million Bui project on the Black Volta River, when completed in 2013, will flood a quarter of Bui National Park and displace 2,600 people, both projects being financed and undertaken by China.[25]

There have been general calls on the transnational companies' home governments to monitor their activities abroad to make sure that they operate in an ethical way in the host countries.[26]

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[16] Lucy Corkin, China, Africa and the Environment, A Briefing Paper on the Forum on China-Africa Co-operation, Prepared for International Rivers,November 5, 2009, http://asiandrivers.open.ac.uk/FOCAC%20Background%20Paper.pdf.

[17] The Chinese in Africa,

[18] Comments made by the Zimbabwe's environment minister, as cited in The Chinese in Africa,

[19] Ian Taylor, China's environmental footprint in Africa, China Dialogue, February 02, 2007, http://www.chinadialogue.net/article/show/single/en/741.

[20] Howard W. French, Afr Aff (Lond) (January 2007) 106 (422): 127-132.

[21] Wang and Jin found that both state owned companies and privately owned companies in China have poor pollution control performance when compared with collectively or community owned companies or wholly foreign owned companies. Hua Wang & Yanhong Jin, Industrial Ownership and Environmental Performance: Evidence from China, World Bank Policy Research Working Paper 2936, December 2002.

[22] Stephanie Nieuwoudt, Pros and Cons to Huge Chinese Investment in DRC, CAPE TOWN, Oct 28 (IPS), http://ipsnews.net/africa/nota.asp?idnews=49031.

[23] Peter Bosshard, China's Environmental Footprint in Africa, 04/2008, http://www.internationalrivers.org/files/SAIIA%20policy%20briefing%20508.pdf; Shai Oster, China: New Dam Builder for the World, the Wall Street Journal, December 28, 2007.

[24] JIM YARDLEY, Dam Building Threatens China's 'Grand Canyon', March 10, 2004, http://www.nytimes.com/2004/03/10/world/dam-building-threatens-china-s-grand-canyon.html?src=pm; MICHAEL CASEY, UN Study Advises Caution over Dams, AP foreign, Friday May 22 2009, http://www.guardian.co.uk/world/feedarticle/8520596 (A United Nations report observes that a dam development in China causes "changes in river flow volume and timing, water quality deterioration and loss of biodiversity.").

[25] Randall Hackley and Lauren van der Westhuizen, Africa's Friend China Finances $9.3 Billion of Hydropower, the Bloomberg News, Sep 9, 2011, http://www.bloomberg.com/news/2011-09-09/africa-s-new-friend-china-finances-9-3-billion-of-hydropower.html

[26] EVELOPMENT ECONOMIC DEVELOPMENT IN A FRICA, Rethinking the Role of Foreign Direct Investment, UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

It is true that the investors' home governments should do more to monitor their companies' investment in Africa. It is also true that the investors should make efforts to invest in Africa in an ethical way with particular regard to its impact on the environment and the long-term livelihood of the local people. However, it is far from true that those things would happen automatically with moral suasion. The important question is for the African countries to consider where the balance should be struck between development and environment and what law is to be enacted to ensure that its long-term prosperity is not sacrificed for short term investment. As Cooma argues, "the responsibility to protect the environment should not be that of the investor alone. It is a matter of the [host] government being clear on environmental policies and enforcing them." [27] Indeed, sound national development policies are needed to promote foreign investment and a sound legal and institutional framework plays a crucial part. The designing FDI policies must embody development framework mindful of the impact of FDI on domestic economic performance, with the ends of achieving both economic and social development.[28] The United Nations recommends that the least developed countries should strengthen their national policy and regulatory framework inter alia to secure contract enforcement and forge private and public cooperation.[29] It further recommends that the LDCs put in place some facility to register and oversee new and existing foreign investment.[30]

But currently environmental standards in Africa are "weak"[31] and the African governments are not doing enough to make the right balance between the attraction of FDI and the protection of environment. For instance, in Angola, the law of environment requires that foreign investors be licensed to engage in petroleum, mining, road construction or power stations.[32] To obtain such a licence, they must complete an environmental impact study for approval by the Angolan Ministry of Environment.[33] Failure to obtain a licence or to comply with the terms of the licence incurs the liability of a fine.[34] In June 2002, Chevron Texaco was fined two million US dollars after its offshore oil pipeline leakage resulted in

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Geneva UNITED NATIONS, New York and Geneva, 2005, at p80, www.unctad.org/en/docs/gdsafrica20051_en.pdf;

[27] Dr Rita Cooma, CEO of a New York-based management consulting firm, as quoted in Stephanie Nieuwoudt, Pros and Cons to Huge Chinese Investment in DRC, CAPE TOWN, Oct 28 (IPS), http://ipsnews.net/africa/nota.asp?idnews=49031. Clearly, a lot needs to be done to convince the African governments of the importance of protection of environment in the midst of their development; Prime Minister Meles Zenawi of Ethiopia obviously tilted the balance toward development by insisting that "Hydropower will have to be at the center of Africa's energy future", as cited in Randall Hackley and Lauren van der Westhuizen, Africa's Friend China Finances $9.3 Billion of Hydropower.

[28] Rethinking the Role of Foreign Direct Investment, at p82.

[29] Fourth United Nations Conference on the Least Developed Countries Istanbul, Turkey, 9-13 May 2011, available at ldc4istanbul.org/uploads/IPoA.pdf

[30] Fourth United Nations Conference on the Least Developed Countries Istanbul, Turkey, 9-13 May 2011, available at ldc4istanbul.org/uploads/IPoA.pdf

[31] Cosima Cassel et al, Building African Infrastructure with Chinese Money, June 22, 2010, http://www.barcelonagse.eu/tmp/pdf/ITFD10Africa.pdf.

[32] Note that the Angolan Ministries of Petroleum and Environment was joined efforts to amend its current law to encompass such matters "as measures for treatment of residues, studies of Environmental Impact, Management of Operational Discharge, Prevention of and Response to Oil spills, as well as implementation of Environmental Management, Auditing and Monitoring Systems." http://www.ao.undp.org/news137.htm .

[33] http://www.saiea.com/dbsa_handbook_update09/pdf/3Angola09.pdf

[34] the Decree on Environmental Impact Assessment (Decreto sobre Avaliação de Impacte Ambiental) No. 51/2004

pollution to beaches and damage to the fishing industry in Cabinda, Angola.[35] It is questionable to what extent the fine reflects the actual environmental damage. In fact, the local press and environmentalists in Angola had blamed Chevron for oil spills for years;[36] apparently no actions had been taken either by Chevron or by the government before the spills. Furthermore, there is no indication whether the one-off fine would be sufficient to reimburse the cost for the long-term environmental damage. Then one may also consider uncommon the government's success in claiming the compensation in this case in the same way as with the BP deepwater horizon oil spill in the Mexican Gulf: "Had a small firm, rather than BP, been responsible for the spill, the public would have been left with a huge bill. In that perverse sense, we should perhaps consider ourselves lucky."[37] Indeed, with respect to a small or medium sized firm, it is uncertain whether the government is able to claim compensation for environmental damage and whether the firm is able to meet the demand out of its limited resources; furthermore there is the issue with the polluters which have declared bankrupt or insolvent or those which no longer operate in the jurisdiction many years later when the environmental damage shows up.

In this paper, I discuss the bonding requirements as a solution for the African governments to address the environmental damage by overseas investors. I discuss this question with particular reference to the Chinese investment in Africa. I argue that the conventional bonding requirements are stricken with problems which would become particularly acute in the context of Africa; however, the requirements can be modified with the participation of the home government of the investors, which would provide a sound framework for African countries.

It should be pointed out that it is not that the Chinese companies alone may disregard environmental protection in their investment and need control; in fact, any company, be it Chinese or Western or local, may behave irresponsibly in the absence of strong and enforceable measures and may leave the government to shoulder the bill for remedying the damage. As seen above, Chevron Texaco disregarded protests and warnings for years and eventually caused its large-scale oil leak. This poses the question, to what extent the modified version of the bonding requirements, if workable with reference to Chinese investors, has any wider application. The paper will address this question before conclusion.

TORT LIABILITY

When the environmental damage occurs, the government or the aggrieved parties sue the alleged polluters in tort. If the allegation is not made out, ie no causal link is established, the suit is not successful and the liable polluter "disappears", the so-called "disappearing

[35] Christen Reed, Crude Existence: Environment and the Politics of Oil in Northern Angola. UC Press: Berkeley.
[36] Angola fines Chevron for pollution, BBC news, 1 July 2002, http://news.bbc.co.uk/1/hi/business/2077836.stm.
[37] Joshua Linn and Nathan Richardson, Instilling a Stronger Safety Culture: What are the Incentives? http://www.rff.org/RFF/Documents/RFF-Resources-177_StrongerSafetyCulture.pdf

defendant problem."[38] Where the causation is established and the liable firm is successfully sued, there is a concomitant problem. For example, the damage is worth one million pounds, either for cleanup or for reclamation of a mining site, but the polluters have only half a million pounds' resources; then under the liability rule, their liability does not exceed their resources. This is referred to as "the judgment proof" problem.[39] The problem is acute if the liable firm does not have financial means to meet its obligations and hence declares bankruptcy.[40] The problem is aggravated when the law allows the firm to discharge its liability in the case of bankruptcy.[41] The problem becomes more acute with adverse social implications of job loss etc "where firms become insolvent as the result of the financial obligations arising from some catastrophic environmental or safety mishap."[42]

Shavell argues that "potential insolvency causes a reduction in care level" and "socially efficient outcome" is hard to achieve.[43] Boyd analyses the problems with "a bankrupt, dissolved, or absent polluter" and shows that a firm may avoid the cost for environmental cleanup through bankruptcy or dissolution.[44] Boyd identifies that "The U.S. landscape is littered with environmentally damaging operations that were either abandoned entirely or left unreclaimed due to bankruptcy."[45] A U.S. Environmental Protection Agency Superfund study shows that "the cost of so-called orphan shares—liability costs for site cleanup that cannot be recouped due to a polluter's bankruptcy or absence—will range from $150 million to $420 million every year at federal Superfund sites alone."[46] Repetto reported on mining companies in the US and came to similar finding that some had filed for bankruptcy, leaving the financial burden of remediation on taxpayers. Dakota Mining Company running the Gilt Edge gold Mine offers an example. When the company filed for bankruptcy, it left 130 million gallons of acid mine wastewater on the mine. The State concerned held a cash bond

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[38] John Summers (1983), 'The Case of the Disappearing Defendant: An Economic Analysis', University of Pennsylvania Law Review, 132, 145–85

[39] Steven Shavell, The Judgment-Proof Problem, 6 Int'l Rev. L. & Econ. 45 (1986).

[40] James Boyd and Howard Kunreuther (1997), 'Retroactive liability or the public purse?', Journal of Regulatory Economics 1 1: 79-90 at 82. TR Beard, Bankruptcy and Care Choice, The RAND Journal of Economics,Vol. 21, No. 4, Winter, 1990.("bankruptcy can result and the injurers can escape some of the costs of its activities")

[41] Id.

[42] D Gerard, EJ Wilson. Environmental bonds and the problem of long term carbon sequestration, International Society for New Institutional Economics (ISNIE), Boulder, Colorado September 22-24 2006.

[43] Steven Shavell; also see Tomislav Vukina, The Relationship between Contracting and Livestock Waste Pollution, Review of Agricultural Economics vol 25, no. 1, 66-88.

[44] James Boyd, Financial Assurance for Environmental Obligations. See further Albert C. Lin, SIZE MATTERS: REGULATING NANOTECHNOLOGY, 31 Harv. Envtl. L. Rev. 349 (2007) at 399; Jeffrey Kehne, *Encouraging Safety Through Insurance-Based Incentives: Financial Responsibility for Hazardous Wastes*, 96 YALE L.J. 403, 405 (1986); William T. Gorton III, Esq., UNDERSTANDING THE RECLAMATION SURETY RELATIONSHIP BEFORE AND AFTER OPERATOR DEFAULT, Rocky Mountain Mineral Law Foundation, Special Institute on Mine Closure, Financial Assurance and Final Reclamation, Westminster, Colorado, November 2009 ("Frequently in bankruptcies, debtor companies and their secured creditors attempt to sell attractive assets to maximize the dollar recovery but ignore and attempt to leave behind their environmental reclamation obligations.").

[45] James Boyd, Show Me the Money: Environmental Regulation Demands More, Not Less, Financial Assurance, RESOURCES SUMMER 2001 / ISSUE 144 at 21. www.rff.org/RFF/Documents/RFF-Resources-144-showme.pdf.

[46] James Boyd, Show Me the Money: Environmental Regulation Demands More, Not Less, Financial Assurance, RESOURCES SUMMER 2001 / ISSUE 144 at 21. www.rff.org/RFF/Documents/RFF-Resources-144-showme.pdf.

of $6.2 million with a demand note for the balance of $6.8 million. The state government ended up spending $27 million with an additional $18 million for complete reclamation.[47]

In bankruptcy, the government has no priority for environmental claims over claims by other creditors; in the US, when a company files for the Chapter 11 bankruptcy, the law discharges it from any pre-bankruptcy claims arising before the confirmation of the plan of reorganization. In *Ohio v. Kovacs,*[48] following Kovacs's refusal to comply with a cleanup order, the state of Ohio put the company under receivership and repossessed the site concerned. The Court held that the state's action was a monetary payment claim and it was dischargeable under the Bankruptcy Code. However, when a firm emerges from bankruptcy, it may still be liable for environmental damage. In *United States v. Apex Oil Co,* the government sought an injunctive relief under the Resource Conservation and Recovery Act ("RCRA") from a firm to clean up petroleum contamination 15 years after its reformation following a Chapter 11 bankruptcy.[49] The Seventh Circuit distinguished *Kovacs,* refused to hold the government's injunction to be a "claim" under Chapter 11 and upheld the injunctive relief of $150 million cleanup.

Firms may attempt to escape liability through outright declaration of bankruptcy. It is also likely that "firms may purposefully increase the likelihood of bankruptcy by divesting themselves of capturable assets in order to externalize costs."[50] Moreover, to escape liabilities, a firm may legally dissolve and hence the cost recovery becomes impossible. As environmental damage is more likely to emerge over many years, a firm may sell its assets over the period and then fully dissolves itself, thereby effectively externalizing environmental costs.[51]

BONDING REQUIREMENTS AND PROBLEMS

To address the problems with tort liability, the bonding requirements are often adopted. There are many advantages with the bonding requirements. For example, there is no need to establish the causal link between the defendant firm and the damage;[52] rather all that is required is to show that the environment is damaged, the site is un-reclaimed, etc. The burden of proof is then shifted onto the firm which in discharging the liability must show that the damage was not caused by them.[53] The form of the bond may come as a surety bond or cash deposits or letter of credit. The benefit of the surety bond or letter of credit is clear; the provider/underwriter of the surety bond would examine the firm's credit standing, its

[47] Robert Repetto, Silence is Golden, Leaden, and Copper, Disclosure of Material Environmental Information in the Hard Rock Mining Industry, http://environment.research.yale.edu/documents/downloads/o-u/repetto_report_full.pdf.
[48] 469 U.S. 274 (1985)
[49] ., 579 F.3d 734 (7th Cir. 2009),
[50] James Boyd, Financial Assurance for Environmental Obligations
[51] James Boyd, Financial Assurance for Environmental Obligations
[52] Albert C. Lin, SIZE MATTERS: REGULATING NANOTECHNOLOGY, 31 Harv. Envtl. L. Rev. 349 (2007).
[53] D Gerard, EJ Wilson. Environmental bonds and the problem of long term carbon sequestration, International Society for New Institutional Economics (ISNIE), Boulder, Colorado September 22-24 2006.

financial statements, business practices, and overpayment history. This actually helps to screen out unviable businesses.[54]

The bonding requirements are widely used. To make sure that they perform their contracts, importers and exporters are often required to fulfill the bonding requirements.[55] For example, the Dominican Republic requires importers to post a bond to guarantee the payment of the selective consumption tax, as it does with domestic producers.[56] In the 1960s, two voluntary associations, namely, the Association of British Travel Agents (ABTA) and the Tour Operators Study Group (TOSG) introduced the first bonding scheme to safeguard the interests of air travelers and provide compensation for aggrieved travelers. Under the scheme, each of their members was required to contribute 5% of their annual turnover as their bonds.[57] Initially, both companies held and managed the bonds for their members and arranged for repatriation of passengers from abroad and refunds of payments; now the CAA undertakes the management.[58]

In the US, the Miller Act makes the bonding compulsory for the government contract projects. Two types of bonds are required before any contract for the federal public work projects of over $100,000 is awarded: a performance bond and a payment bond. The former aims to protect the Federal Government whereas the latter protects suppliers of labour and material.[59] Additional bonds may be required.[60] In essence, it protects suppliers of labour or materials to contractors or subcontractors. Subcontractors and suppliers of labour or material may sue on the payment bond, so may those suppliers who contract with the subcontractors and hence have no contractual relationship with the contractor. [61] A supplier's right to bring a civil action on the payment bond may be waived subject to the stringent conditions. The

[54] DEPARTMENT OF HEALTH AND HUMAN SERVICES, Centers for Medicare & Medicaid Services, 42 CFR Part 424, [CMS-6006-P], RIN 0938-AO84, Medicare Program; Surety Bond Requirement for Suppliers of Durable Medical Equipment, Prosthetics, Orthotics, and Supplies (DMEPOS), http://www.cms.gov/MedicareProviderSupEnroll/downloads/DMEPOSSuretyBondRegulation.pdf

[55] Exporters to emerging markets sometimes need to meet the similar bonding requirements; it is common that the exporting government offers the exporters assistance to enable them fulfill the requirements by organizing banks to offer contract bonds to share the risk. See Trade and Investment for Growth, Presented to Parliament by the Secretary of State for Business, Innovation and Skills By Command of Her Majesty, February 2011, http://www.bis.gov.uk/assets/biscore/international-trade-investment-and-development/docs/t/11-717-trade-investment-for-growth.pdf; The bonding requirements are also used in the enforcement of intellectual property rights. for example, the US Customs requires a bond to be posted with it to cover any damage to a sample of allegedly infringing goods which turn out not to infringe any rights. See the US 2010 Joint Strategic Plan on Intellectual Property Enforcement, http://www.internationalauthenticationassociation.org/upload/file/US%20IP%20Enforcement%20Plan%20Jun%2010.pdf

[56] Dominican Republic – Measures Affecting the Importation and Internal Sale of Cigarettes (WT/DS302), Third Party Submission by the European Communities, Geneva, 27 April 2004.

[57] History of ATOL, 30 years of consumer protection, Civil Aviation Authority http://www.caa.co.uk/default.aspx?catid=1080&pagetype=90&pageid=6494

[58] Id.

[59] 40 U.S.C. §§ 3131

[60] 40 U.S.C. §§ 3131–3134 (e)

[61] 40 U.S.C. § 3133

unique feature of the Act is that the action is brought against the surety of the bond; it is "to shift the ultimate risk of nonpayment from workers and suppliers to the surety."[62]

The bonding requirements are also used in the mining and oil exploration and production. This is our interest in this paper. Such requirements are aimed to safeguard the protection of the environment and the compensation of the aggrieved parties from the environmental damage. The requirements in essence embody the bond agreement between the parties. The agreement sets down clear criteria under which the bond is to be released to the firm. It also specifies the firm's liabilities whereby the bond is to be forfeited; as with other liabilities, first and foremost the liabilities for environmental damage must be established before the bond is forfeited. Furthermore, the funds cannot be used for liabilities not covered in the agreement.[63]

The problems with the bonding requirements are with the adequacy of the bond amount, its scope of coverage, and the firm's duration of liability.[64] The amount of the bond is based on estimates *ex ante*. But sometimes, environmental damage is difficult to be measured in monetary terms;[65] plus, the damage may only emerge many years later when the responsible actor does not exist anymore. This may well leave the bond insufficient for the cost of cleanup or reclamation.[66] The design of the bond may take this into account, but that is a difficult task as acknowledged,

"any formula that sets bonding commitments at a high level would entail an incremental cost to operators, potentially discouraging or preventing investment among small companies, while placing additional economic burden on development and property transactions. On the other hand, bonding levels that are set at average cost do not adequately account for the possibility of cost falling above posted levels, essentially requiring that a portion of the risk be held by the government."[67]

Some industries such as the mining industry employ the "worst case scenario"; i.e., the value of the bond is set at maximum reclamation cost liability.[68] Historically in the US, coal mining left many sites un-reclaimed or under-claimed. The US passed the Surface Coal Mining and Reclamation Act ("SMCRA") to deal with such problems as the cost of reclaiming those sites. The mining operators are required to post a reclamation bond which will be collected upon

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[62] THE LAW OF PAYMENT BONDS (K. Lybeck and H Bruce Shreves, eds., A.B.A. 1998), at 65. a surety company provides the bond on the basis of collateral securing the bond. The surety company vets the investors or traders before providing the bond. The bond is a legal guarantee for signing contracts or performing them.
[63] http://www.rff.org/documents/RFF-DP-01-42.pdf, at
[64] L. Thomas Galloway and Thomas J. Fitzgerald, THE BONDING PROGRAM UNDER THE 1977 SURFACE MINING CONTROL AND RECLAMATION ACT: CHAOS IN THE COALFIELDS, (1987) W. VA. L. Rev. 675 at 681.
[65]Frank Wätzold, *Efficiency and Applicability of Economic Concepts Dealing with Environmental Risk and Ignorance*, 33 ECOLOGICAL ECON. 299, 308 (2000) at 307.
[66] Watzold at 307.
[67] Mark J. Kaiser and Allan G. Pulsipher, A Review and Update of Supplemental Bonding Requirements in the Gulf of Mexico, Coastal Marine Institute, October 2008, http://www.boemre.gov/tarprojects/600/MMSBondingReport_12_08.pdf.
[68] Albert Lin at 401.

default.[69] Defaulting operators unable to meet the full cost of reclaiming the site will not receive future mining licences; the regulatory agency, rather than the operators, determines the amount of reclamation of land; the reclamation bond is set at an amount sufficient to reimburse all projected costs of reclamation.[70]

The worst case scenario may not have much wide application where the worst case cannot be identified. For example, in relation to the emerging nanotechnology industry where the scale of risk and damage is unknown, the worst case is hard to predict. Lin, in this connection, suggests that where a firm does not exceed the damage level as specified by the necessary authority, the bond could be made wholly or partially refundable and "the unrefunded portion of the bond, intended to cover expected damages that have not yet occurred, would be deposited in a trust fund that the proposal would establish."[71] But the crucial question is how to determine the damage level in the first place, then for how long the un-refunded sum would be kept in the trust fund. This further raises a broader issue, that is, in many cases, there is latency between a firm's activities and the emergence of the environmental damage, and the bond may not be still valid; even if it is, it may not be sufficient to meet the cost of cleanup etc. As some suggested, "the public sector is only protected up to the amount of the bond posted, not for the full amount of potential damages. If the firm remains solvent, regulators can seek a remedy through the courts."[72] But, the firm may have become insolvent, in which case the excess of the cost falls on the shoulder of the tax-payers.[73]

Some particular industries adopt a bond pool with the government's participation, which would appear to resolve the above problems. In the US, in an effort to encourage the development of nuclear power, the government passed the Price-Anderson Act "to assure adequate public compensation in the case of a nuclear accident; and to set a limit on the liability of private industry to remove a major deterrent to private participation in the development of nuclear energy."[74] It was "a protective measure to ensure participation in the field of nuclear energy in a time when the insurance industry was either not able or willing to provide the necessary coverage to protect new entrants into the atomic energy field."[75] It establishes a system as is "financed through a combination of private insurance and mandatory contributions to a common fund."[76] The mandatory contributions forms a pooling whereby "each nuclear licensee is required to purchase $160 million in private liability

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[69] The bonds may be one of the following three types: corporate surety bonds where the third party guarantor underwrites the firm's obligation to pay the cost of reclamation, collateral bonds which include cash, letters of credit etc, or self bonds as executed by the firm itself or a qualified third party. Craig B. Giffin, Esq, WEST VIRGINIA'S SEEMINGLY ETERNAL STRUGGLE FOR A FISCALLY AND ENVIRONMENTALLY ADEQUATE COAL MINING RECLAMATION BONDING PROGRAM, 107 W V Law Rev 105 (2004).

[70] Craig B. Giffin, Esq, WEST VIRGINIA'S SEEMINGLY ETERNAL STRUGGLE FOR A FISCALLY AND ENVIRONMENTALLY ADEQUATE COAL MINING RECLAMATION BONDING PROGRAM, 107 W V Law Rev 105 (2004)

[71] Albert C. Lin, SIZE MATTERS: REGULATING NANOTECHNOLOGY, 31 Harv. Envtl. L. Rev. 349 (2007)

[72] D Gerard, EJ Wilson. Environmental bonds and the problem of long term carbon sequestration, International Society for New Institutional Economics (ISNIE), Boulder, Colorado September 22-24 2006.

[73] Id.

[74] S. Rep. No. 100-70, at 1426 (1988), reprinted in 1988 U.S.C.C.A.N. 1424. Enacted in 1957 and amended in 1988,

[75] Linda S. Mullenix and Kristen B. Stewart, THE SEPTEMBER 11TH VICTIM COMPENSATION FUND: FUND APPROACHES TO RESOLVING MASS TORT LITIGATION, 9 Conn. Ins. L.J. 121at 139.

[76] Robert L. Rabin, SOME THOUGHTS ON THE EFFICACY OF A MASS TOXICS ADMINISTRATIVE COMPENSATION SCHEME 52 Md. L. Rev. 951 (1993) at 955.

insurance and to contribute a maximum of $10 million yearly (up to a maximum of $63 million) to the compensation fund when there is a nuclear incident at any plant", then all liability for nuclear accidents was capped at $560 million.[77] The firm's liability is capped at a certain level and the government indemnifies the damages over that level. With the 1988 amendment, "federal indemnity would be phased out"; instead, excess damages would be funded from the compensation pool/self-insurance scheme made for Nuclear Regulatory Commission licensees.[78]

The pooling scheme has many problems. For example, it creates "a moral hazard".[79] Bengt Holmstrom explains moral hazard as follows:

"It has long been recognized that a problem of moral hazard may arise when individuals engage in risk sharing under conditions such that their privately taken actions affect the probability distribution of the outcome." [80]

In a situation where moral hazard occurs, the arrangement "will not induce proper incentives for taking correct actions".[81] Thus, the pooling scheme undermines incentives for safe operation.[82] As the compensation for the aggrieved parties depends on the pooling mechanism, it "de-emphasiz[es] the importance of individual responsibility". [83] Precisely because the pool does not demarcate individual responsibility, it "blunt[s] the incentives to investment in optimal safety by individual firms".[84] Priest argues that "moral hazard

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[77] Linda S. Mullenix and Kristen B. Stewart, THE SEPTEMBER 11TH VICTIM COMPENSATION FUND: FUND APPROACHES TO RESOLVING MASS TORT LITIGATION, 9 Conn. Ins. L.J. 121at 139.(internal quotes omitted). The latest figures are below,
"Under existing policy, utilities that operate nuclear power plants pay a premium each year for $300 million in private insurance for offsite liability coverage for each reactor unit. This primary insurance is supplemented by a second policy. In the event a nuclear accident causes damages in excess of $300 million, each licensed nuclear reactor would be assessed a prorated share of the excess up to $95.8 million. With 104 plants licensed to operate, this secondary pool contains about $8.6 billion. After 15 percent of this pool is expended, prioritization of the remaining funds is left to the discretion of local jurisdictions. After the insurance pool is used, responding organizations like State and local governments can petition Congress for additional disaster relief under the provisions of Price-Anderson." United States Nuclear Regulatory Commission, Fact Sheet on Nuclear Insurance and Disaster Relief Funds 1 (2008), available at http:// www.nrc.gov/reading-rm/doc-collections/fact-sheets/funds-fs.pdf.
As cited in Carly B. Eisenberg, DUMONTIER V. SCHLUMBERGER: SUBCELLULAR DAMAGE UNDER THE PRICE-ANDERSON ACT, 15 B.U. J. Sci. & Tech. L. 304 (2009).
[78] Cole Mahone Adams, DAMAGES AND INJURY: SMITH V. CARBIDE AND CHEMICALS CORPORATION AND THE APPLICATION OF KENTUCKY LAW UNDER THE PRICE-ANDERSON ACT, 22 J. Nat. Resources & Envtl. L. 175 (2008-2009)
[79] Alexandra B. Klass and Elizabeth J. Wilson, CLIMATE CHANGE AND CARBON SEQUESTRATION: ASSESSING A LIABILITY REGIME FOR LONG-TERM STORAGE OF CARBON DIOXIDE 58 Emory L.J. 103 (2008) at 168.
[80] Bengt Holmstrom, Moral Hazard and Observability, The Bell Journal of Economics, Vol. 10, No. 1, (Spring, 1979), pp. 74-91 at 74.
[81] Bengt Holmstrom at 74.
[82] Alexandra B. Klass and Elizabeth J. Wilson at 168.
[83] Robert L. Rabin, SOME THOUGHTS ON THE EFFICACY OF A MASS TOXICS ADMINISTRATIVE COMPENSATION SCHEME 52 Md. L. Rev. 951 (1993) at 955.
[84] Robert L. Rabin, SOME THOUGHTS ON THE EFFICACY OF A MASS TOXICS ADMINISTRATIVE COMPENSATION SCHEME 52 Md. L. Rev. 951 (1993) at 955.

increases the costs of injuries and, thus, increases the risk level."[85] So it is no surprise that some firms may "take greater risks because they are insured".[86]

A further problem with the pooling scheme is that it screens out those who do not meet the pool membership criteria; it may "increase substantially the cost of reclamation bonding or to prohibit market entry altogether because of unavailability of surety bonds".[87] This raises the issue of equity.

REGULATORY AGENCY AND APPEAL PROCESS

The firm under the bonding requirements is overseen by a regulatory body. The function of regulators is that they monitor the work of the firm and authorise the release of funds after the firm meets the obligations specified in the bond agreement. Whether the regulators decide to release the bond of the compliant firm or collect the bond of the defaulting firm, the decision is a complex process; two issues among others are worth noticing. First, regulators must work closely with scientific and engineering expertise to establish the environmental damage.[88] Second, where environmental damage is observable, the firm's liability is clear and can be readily resolved by reference to the bond agreement;[89] in such a case, the regulator's task is easy and may invite less dispute. Then, in other cases, the regulators may need to take into account the future or potential damage as well and then where feasible increase the bonding requirements under annual review. This is a difficult process and Repetto reported that, due to lack of effective action of regulators, many sites in the US were un-reclaimed or under-reclaimed, resulting in huge burdens on taxpayers for the complete reclamation.[90]

Generally, the regulation of the bonding requirements and the decision of the regulators is subject to independent judicial review; this enhances regulatory standards and provides the requisite due process for the firm in relation to the decision of the regulators. Moreover, due process in turn functions to improve regulatory standards and framework. In fact, accountable regulation is important to attract FDI, despite the extra cost for the firm. FitzGerald argues that "regulatory standards that are regarded as predictable by investing firms will reduce uncertainty and increase the attractiveness of investment, even if they involve higher operating costs. This predictability can itself be derived from the legal or legislative process that supports them, which means they will not be applied arbitrarily".[91] Similarly, Sun regards a sound regulatory framework with enforceable laws and regulations as "imperative

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[85] George L. Priest, Insurability and Punitive Damages, 40 ALA. L. Rev. 1009 (1989) at 1023-1024.
[86] Joshua Linn and Nathan Richardson, Instilling a Stronger Safety Culture: What are the Incentives? http://www.rff.org/RFF/Documents/RFF-Resources-177_StrongerSafetyCulture.pdf.
[87] L. Thomas Galloway and Thomas J. Fitzgerald, THE BONDING PROGRAM UNDER THE 1977 SURFACE MINING CONTROL AND RECLAMATION ACT: CHAOS IN THE COALFIELDS, (1987) 89 W. VA. L. Rev. 675 at 684.
[88] http://www.rff.org/documents/RFF-DP-01-42.pdf
[89] *See* Wätzold, at 307
[90] Repetto
[91] Valpy FitzGerald, REGULATORY INVESTMENT INCENTIVES, 20 November 2001, the OECD, www.oecd.org/dataoecd/32/17/2510459.pdf.

for FDI to enter and thrive".[92] However, there are problems with the court system in most African countries. Take Angola for example, apart from high legal fees, it takes a considerably long time for the court to hear a case because the judicial system there lacks capacity and efficiency.[93] The World Bank's *Doing Business in 2010* survey shows that a court case for contract enforcement could take up to 1,011 days and cost up to 44 percent of the claim in Angola.[94]

Arbitration is possible. The Voluntary Arbitration Law in Angola, for example, gives the parties the opportunity to resolve their general disputes through arbitration; then the Petroleum Activities Law of 2004 provides an arbitration framework in particular relation to disputes over petroleum activities. But there are difficulties. The first difficulty is with lack of enforcement of arbitral awards as Angola is not a member of the United Nations' New York Convention. The second difficulty is that Angola is not party to the major convention for investment dispute settlement, namely, the World Bank's International Center for Settlement of Investment Disputes (ICSID).[95] What is significant about ICSID arbitration is that it gives an individual direct recourse against a state for investment related matters.[96] Investors there cannot resort to such a dispute settlement regime in Angola. Moreover, as Angola is not a member to the New York Convention, the ICSID award, if given elsewhere, is not directly enforceable, but can only be recognized and enforced through the national courts, hence the problems with the judicial systems.

Leaving aside its own problems such as lack of due process,[97] arbitration is particularly problematic in Africa. First, the cost is an issue; "the requirement of advance payment of arbitration costs in modest amounts of US $50,000 to US$200,000 may be a heavy imposition on an African country or party which suffers from an acute shortage of foreign exchange resources, and has made no provision for this contingency."[98] Then there are other problems; Asante argues:

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[92] Xiaolun Sun, How to Promote FDI? The Regulatory and Institutional Environment for Attracting FDI, Prepared by the Foreign Investment Advisory Service for the Capacity Development Workshops and Global Forum on Reinventing Government on Globalization, Role of the State and Enabling Environment and Sponsored by the United Nations, Marrakech, Morocco, December 10-13, 2002, unpan1.un.org/intradoc/groups/public/documents/un/unpan006349.pdf

[93] 2008 Investment Climate Statement – Angola, http://www.state.gov/e/eeb/ifd/2008/100819.htm

[94] 2010 Investment Climate Statement BUREAU OF ECONOMIC, ENERGY AND BUSINESS AFFAIRS, May 2010, http://www.state.gov/e/eeb/rls/othr/ics/2010/138777.htm.

[95] Concerns about ICSID's integrity were one of the main reasons that some African countries refused to join it. Susan D. Franck, THE ICSID EFFECT? CONSIDERING POTENTIAL VARIATIONS IN ARBITRATION AWARDS, 51 Va. J. Int'l L. 825 (2011). Note that Franck's Analysis of ICSID data shows that "ICSID arbitration awards were not statistically different from other arbitral processes" hence, "ICSID arbitration was not necessarily biased or that investment arbitration operated in reasonably equivalent ways across forums". Id.

[96] Schmitthoff (11th ed) at 556.

[97] Alec R. Johnson, RETHINKING BILATERAL INVESTMENT TREATIES IN SUB-SAHARAN AFRICA, 59 Emory L.J. 919 (2010) at 965.

[98] S.K.B. Asante, 'The Perspectives of African Countries on International Commercial Arbitration', 6 *Leiden J. Int'l L*. (1993) 331, at pp. 333 - 334. at p. 146.

"A number of factors - paucity of training facilities in international arbitration, political instability, rapid turnover of public servants, bureaucratic barriers to transmitting or utilizing valuable international experience - have combined to limit the exposure of African lawyers in the public and private sectors to the intricacies of international arbitration."[99]

However, independent adjudication is important so much so that "African countries are not likely to attract FDI if they do not grant foreign investors the right to resort to some form of independent adjudication".[100] But the current judicial and arbitral systems in Africa are stricken with problems and may well do a disservice to the FDI. Are there any alternatives? Johnson proposes some alternatives. Johnson advocates an international commercial court which offers many advantages.[101] Full-time judges hear the case in lieu of arbitrators, reducing conflicts of interest and enhancing due process.[102] Then, unlike an arbitral award, the decision is subject to proper appellate procedures.[103] Under ICSID for example, the award is final and it does not have an appeal process; the Centre only has an internal procedure for the interpretation, revision or annulment of an award; for example, the defendants may apply to the Secretary-General to annul an award on the specified grounds that "the Tribunal was not properly constituted; the Tribunal has manifestly exceeded its powers; there was corruption on the part of a member of the Tribunal; there has been a serious departure from a fundamental rule of procedure; the award has failed to state the reasons on which it is based".[104]

Given that the seat of arbitration is usually outside Africa, Johnson also proposes localization of arbitration as "a less dramatic alternative".[105] Whilst it would reduce the cost of arbitration and make arbitration more accessible to local businesses, it does pose the questions of short-term alternatives and the need for investment in training local arbitrators.

The first alternative does appear to be dramatic in that the legitimacy of an international court is an issue, let alone its cost when compared with a domestic court. The second alternative apparently reflects the trend of arbitration in Africa. As argued above, until competent arbitral facilities and personnel are in place, a current alternative is needed.

OUR PROPOSED SOLUTION

From the above discussion, the bonding requirements are stricken with the problems of the firm's evading liabilities through bankruptcy/insolvency and of the government's grappling

[99] S.K.B. Asante, 'The Perspectives of African Countries on International Commercial Arbitration', 6 *Leiden J. Int'l L*. (1993) 331 at 137.
[100] Alec R Johnson
[101] Alec R. Johnson, RETHINKING BILATERAL INVESTMENT TREATIES IN SUB-SAHARAN AFRICA, 59 Emory L.J. 919 (2010) at 965.
[102] Id.
[103] Id.
[104] Rule 50 (1) (c) (iii), the ICSID Convention, Regulations and Rules as Amended and Effective April 10, 2006. http://icsid.worldbank.org/ICSID/StaticFiles/basicdoc/basic-en.htm
[105] Alec R. Johnson at 965-6.

with the inadequacy of funds. The pooling scheme may alleviate the problems to a certain extent, but it creates problems such as moral hazard and the blunting of incentives. Furthermore, we identify the problems with the appeal process, both judicial and through arbitration.

In resolving the above problems, we propose that a solution be found in the bonding requirements but with modifications. Under the proposal, the bonding agreement is a tripartite agreement between the firm, the local government and the home government. It involves state participation. It, though, needs to be distinguished from state liability under international law where a state may be liable for pollution that spilled over its borders and inflicted damage on another state. D'Arge et al pointed out that the basic constraint in that situation is "use your own property so as not to injure your neighbor's and every state's obligation [is to] not allow knowingly its territory to be used for acts contrary to other states."[106] It must be made clear that under our proposal the state does not assume liability for environmental damage incurred by its companies overseas; and the claims stop where no fund or no companies are traceable under the state's jurisdiction.

The first issue that arises is, how does such an agreement work and what are the benefits? Under the agreement, the firm posts the bond as usual but the difference than the normal bonding requirements is that the firm's home government is made a party to the agreement. The home government is thus able to enforce the agreement. The framework provides many advantages. First, as the home government possesses or is better equipped to procure information about its firms in relation to their historical records for environmental protection, it can screen out unworthy firms.[107] As Gu has explored, "Thousands of Chinese firms failing to reach the new green standards have been closed down by the Chinese Government. Some of these have relocated to countries, including some in Africa, where regulatory requirements are less stringent or less severely enforced."[108] These firms have undermined the reputation of China's investment in Africa. To improve its image in Africa, China would have the incentives to do the initial screening; the bad publicity and possible political backlash of sending a home company with poor records of pollution or those small unworthy firms would give the government enough reasons to do its homework to prevent future problems.

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[106] Ralph C d'Arge and Allen V. Kneese, State Liability for International Environmental Degradation: An Economic Perspective, 20 Nat. Resources J. 427 (1980) at 429.

[107] It may be arbitrary to exclude firms with poor records; but unless those firms have a clear executable plan to address the problem and possibly post double bond (one to meet the local requirements and one to meet the home requirements), it is wise not to allow those firms to engage in overseas operation as they do present potential risk. As some argued, "While historical performance and length of business experience cannot guarantee future performance, these factors are believed to be indicators of future risk." GAO, DIFFICULTIES IN RECLAIMING MINED LANDS IN PENNSYLVANIA AND West Virginia (Sept. 1986) as cited in L. Thomas Galloway and Thomas J. Fitzgerald, THE BONDING PROGRAM UNDER THE 1977 SURFACE MINING CONTROL AND RECLAMATION ACT: CHAOS IN THE COALFIELDS, (1987) W. VA. L. Rev. 675 at 684.

[108] Jing GU, China's Private Enterprises in Africa and the Implications for African Development, European Journal of Development Research Special Issue, Vol. 24, No.1, 2009.

Second, the bond can be put at an acceptable level, as excessive bonding turns away investors. To fill up the deficiency for clean-up etc after the bond is collected, or to trace the polluters many years later, the home government can locate the firm's parent company in its home country when its overseas operation ceases by completion of contract or by bankruptcy/insolvency and make claims for the African governments.

Third, the advantages are also reflected in the appeal process in relation to the decision of the regulatory body. The home government plays an active role in the appeal process by becoming a member in the appeal panel. To make such a panel more transparent and independent and to improve impartiality, an international organisation such as the IMF and the World Bank may also be asked to serve as a member. NGOs may also be tasked with the protection of environment in Africa and hence be proactively involved in project monitoring.[109] The decision of the regulatory agency and the appeal panel is enforceable in the home government as well. Then with the further involvement of the IMF, the World Bank or the NGOs in the enforcement of the decision, the home government has the incentives to chase up the defaulter and enforce the decision in the home country where necessary.

As the appeal process does not involve the local courts or an arbitration tribunal in Africa, the problems with them are avoided. Furthermore, with international composition and expertise in the appeal panel, the local members are given the unique opportunity to participate in and possibly shape high-level adjudication process. This would provide the necessary experience and help to train expertise for localisation of arbitration in Africa in the future and for improvement of its judicial capacity generally.

The second issue is whether the home government should and would be willing to get involved. The home government's involvement in regulating its firms operating overseas especially with respect to the protection of environment has long been recognised by the United Nations. There have been general calls on the transnational companies' home governments to monitor their activities abroad to make sure that they operate in an ethical way in the host countries; the home governments should implement measures "holding [the transnational companies] accountable to higher standards of corporate responsibility, sharing information gathered with host country policy makers, and designing disciplinary measures and compensation schemes where there is clear evidence of damage to the host economy."[110] As far as China is concerned, the OECD's Environmental Performance Review of China in 2007 emphasized that the Chinese government needs to put strong efforts "to ensure that Chinese corporations operating overseas, particularly in such environmentally sensitive industries as forest products and mining, are positive contributors to China's stated goal of building an international reputation for sound environmental management and sustainable

[109] Cosima Cassel et al, Building African Infrastructure with Chinese Money, June 22, 2010, http://www.barcelonagse.eu/tmp/pdf/ITFD10Africa.pdf.

[110] EVELOPMENT ECONOMIC DEVELOPMENT IN A FRICA, Rethinking the Role of Foreign Direct Investment, UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT Geneva UNITED NATIONS, New York and Geneva, 2005, at p80, www.unctad.org/en/docs/gdsafrica20051_en.pdf

development."[111] The Chinese government was urged to "improve governmental oversight and environmental performance in the overseas operations of Chinese corporations".[112] An African Union meeting of experts and diplomats in September 2006 emphasized the necessity of "finding mechanisms to ensure China pays more attention to environmental damage".[113] Scholars also recognise the importance of "intergovernmental collaboration" to create a level playing field; Gu believes that such collaboration between Chinese and African governments should be formed to "ensure that individual companies cannot go 'shopping' for countries with low standards and those well behaved companies will not lose out to badly behaved companies".[114]

There are in fact many incentives for the Chinese government to get involved in the protection of environment in Africa. China is often accused of exploiting the African resources without regard to the improvement of the human rights there. As said before, the Chinese government defends its position by insisting on the detachment of investment from human rights. It is a long-established policy of China that "China does not mix business with politics"; the Chinese government takes the stance that "human rights are relative, and each country should be allowed their own definition of them and timetable for reaching them".[115] Though it is contentious whether investment should be purely economic, China would need more persuasion and the international community would need to do more to change China's stance if at all. However, as far as the environmental protection is concerned, the situation is different, especially given China's own domestic problem with the environmental damage and its efforts to balance development and environmental protection. Fundamentally, the Chinese government realizes the importance of environmental protection to sustainable development.[116] Indeed, China recently committed itself to cutting its greenhouse gas emissions by 40% by 2020, which commitment has been integrated in its new five-year economic development plan.[117] With its participation in protecting the environment in Africa, the government would show its engagement in the long-term development of the Continent; that would inevitably win good publicity for the government. Undeniably, China pays particular attention to its international image and influence; as one has observed, "The

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[111] Peter Bosshard, China's Environmental Footprint in Africa, 04/2008, http://www.internationalrivers.org/files/SAIIA%20policy%20briefing%20508.pdf

[112] Peter Bosshard, China's Environmental Footprint in Africa, 04/2008, http://www.internationalrivers.org/files/SAIIA%20policy%20briefing%20508.pdf

[113] Akwe Amosu, "China in Africa: It's (Still) the Governance, Stupid" (Washington, DC: Foreign Policy In Focus, March 9, 2007).

[114] Jing GU, China's Private Enterprises in Africa and the Implications for African Development, European Journal of Development Research Special Issue, Vol. 24, No.1, 2009

[115] Stephanie Hanson, China, Africa, and Oil, Council on Foreign Relations, June 6, 2008 http://www.cfr.org/china/china-africa-oil/p9557.

[116] Background Note: China Bureau of East Asian and Pacific Affairs, September 6, 2011, http://www.state.gov/r/pa/ei/bgn/18902.htm ("China's 12th Five-Year Plan (2011-2015) continues the government's policies encouraging greater energy conservation measures, development of renewable energy sources, and increased attention to environmental protection."); Environmental Protection in China, Information Office of the State Council of the People's Republic of China, June 1996, Beijing, http://news.xinhuanet.com/zhengfu/2002-11/18/content_633191.htm ("China has, in the process of promoting its overall modernization program, made environmental protection one of its basic national policies, regarded the realization of sustainable development as an important strategy and carried out throughout the country large-scale measures for pollution prevention and control as well as ecological environment protection.").

[117] Peter Bosshard, China's dam-building will cause more problems than it solves, Under pressure to cut emissions, China risks irreversibly destroying its great rivers and biodiversity hotspots, The Guardian, 4 March 2011, http://www.guardian.co.uk/environment/2011/mar/04/china-dams-emissions-carbon-hydropower.

overseas performance of domestic companies reflects the image and influence of the Chinese government, and is also an important indicator of the nation's soft power".[118] The engagement with environmental protection would further improve China's ties with the local governments and people, making its firms' overseas operation encounter less resistance and gain more cooperation; in this sense, it would improve the economic goal from its investment in Africa. Currently, there are efforts channeled through such venues as the Forum for China Africa Co-operation to facilitate the engagement of the Chinese government in monitoring projects and agreeing environmental standards.[119] The United Nations Environment Program is also involved in the initiative.[120] The Chinese government itself has begun to take the issue seriously. The State Council of China urged Chinese investors to "pay attention to environmental resource protection."[121] The Chinese government is in the process of promulgating the Chinese Overseas Direct Investment Environment Protection Guidelines which Chinese companies must abide by in their overseas investment. The guidelines would require companies to make environmental impact assessment and agree course of action for the protection of environment; they would address the issue of compensation and corporate social responsibility; then, the penalty for the worst violation is cessation of overseas investments.[122]

In the introduction, we ask whether the scheme should be made mandatory for any company and government. We now answer the question in the affirmative. It is self-explanatory that non-discrimination is one of the fundamental principles, be it with investment policies or otherwise. The question here is really whether the scheme should be made mandatory. Discussions in another area may help demonstrate the point. In relation to the discussion of whether the US Price-Anderson Act should be mandatory and be made the basis for an international pooling system, Pelzer argues that a mandatory international pooling system would create unconquerable legal problems in some states such as Germany where there is a constitutional issue to resolve.[123] In contrast, Faure et al argue against a voluntary system; instead, they prefer mandatory participation in the system. They not only believe that the constitutional issue is not irresolvable, but also posit that "A pooling model on a voluntary basis can be difficult to create if there is not a convention behind the operators to force them to pool" and such an international convention is hard to reach.[124] This would raise the same issue for our scheme if it were made voluntary rather than mandatory; lack of an international convention may leave the environmental damage uncompensated for or under-compensated for, but an international convention on environmental protection may be hard to be agreed, as

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[118] Zhang Lijun, director of the Department of Asia Affairs under the Ministry of Foreign Affairs, as cited in Green Norms for Overseas Investment Soon, July 09, 2010, China Daily, http://english.peopledaily.com.cn/90001/90778/90860/7059011.html.

[119] Lucy Corkin, China, Africa and the Environment

[120] China, Africa Underscore Cooperation in Environment Protection, Xinhua News Agency, November 6, 2006, http://www.china.org.cn/english/features/focac/187834.htm.

[121] Lucy Corkin, China, Africa and the Environment

[122] Green Norms for Overseas Investment Soon, July 09, 2010, China Daily,

[123] Norbert Pelzer, International Pooling of Operators' Funds: An Option to Increase the Amount of Financial Security to Cover Nuclear Liability?, 79 Nuclear L. Bull. 37, 46 (2007).

[124] Michael G. Faure and Tom Vanden Borre COMPENSATING NUCLEAR DAMAGE: A COMPARATIVE ECONOMIC ANALYSIS OF THE U.S. AND INTERNATIONAL LIABILITY SCHEMES 33 Wm. & Mary Envtl. L. & Pol'y Rev. 219 (2008).

the chequered history of the Kyoto Protocol and the United Nations Framework Convention on Climate Change shows.[125]

If the scheme is made mandatory, African countries may have concerns as to, e.g., whether it would turn away investors and whether the home governments would agree to the tripartite agreement. With respect to the first concern, indeed, the participation of the home government may mean extra burden and cost for the investors. For example, before investing overseas, a firm may have to satisfy its home government's initial screening process on the viability of its environmental protection plan. That would appear to hinder or possibly deter overseas investment. But such participation by the home government ensures transparency and fairness in the subsequent appeal process concerning regulators' findings and decision. As discussed before, despite the cost, a clear regulatory framework with due process, which the tripartite agreement embodies, actually gives investors certainty and induces, rather than deters FDI.[126] In relation to the second concern, China serves as a counterbalancing power against Western investors and may well provide the impetus for other countries to support the tripartite agreement. For both economic and political reasons, China is so determined to invest in Africa that not only does it invest in countries where Western businesses do, but also it makes investment in areas or countries which other countries would not invest, be it for security reasons or otherwise.[127] To win contracts, firms from other countries certainly do not want to be put at a disadvantage and have all the incentives to urge their own governments to join such a scheme. The United Nations urges all governments to implement measures to ensure that their businesses observe equity in investing overseas. In fact, some governments such as the UK have already set up a domestic framework to make sure that its companies operate overseas in an ethical way.[128] Such efforts could be adapted or expanded to suit the tripartite agreement.

CONCLUSION

[125] See, e.g., William D. Nordhaus and Joseph G. Boyer, Requiem for Kyoto: An Economic Analysis of the Kyoto Protocol, http://www.econ.yale.edu/~nordhaus/homepage/Kyoto.pdf; Afael Leal-Arcas, Is The Kyoto Protocol an Adequate Environmental Agreement To Resolve the Climate Change Problem? *10 (10) European Environmental Law Review 282 (2001*); *Cass R. Sunstein,* OF MONTREAL AND KYOTO: A TALE OF TWO PROTOCOLS, 31 (1) *Harvard Environmental Law Review 1* (2007).

[126] Valpy FitzGerald, REGULATORY INVESTMENT INCENTIVES and Xiaolun Sun, How to Promote FDI? The Regulatory and Institutional Environment for Attracting FDI.

[127] Kaplinsky and Morris, Chinese FDI in Sub-Saharan Africa: Engaging with Large Dragons, The European Journal of Development Research, Vol.21, No. 4, 2009, at 551-569; Chinese Trade and Investment Activities in Africa, Policy Brief, Volume1, Issue 4, The African Development Bank Group, 29 July, 2010.

[128] EVELOPMENT ECONOMIC DEVELOPMENT IN A FRICA, Rethinking the Role of Foreign Direct Investment, UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT Geneva UNITED NATIONS, New York and Geneva, 2005, at p80, www.unctad.org/en/docs/gdsafrica20051_en.pdf

The paper shows that foreign investors including those from China in mining and oil industries cause environmental damage and the local governments do not have in place an adequate framework to address the problem. It proposes that the bonding requirements would offer a solution and the investors' home governments' participation through the tripartite bonding agreement would address problems associated with the conventional bonding requirements. Such a scheme offers many advantages dealing with insolvent polluters; it also offers advantages to the home governments in that such a government as China needs the good publicity as a responsible investor. Given the advantages, the scheme should be made mandatory for any investors and governments that intend to exploit the mine and oil in Africa.