

5 Water for energy

Lawrence Haas presents a wide array of corruption risks that affect hydropower and outlines practical recommendations for reform by a number of stakeholders. Thayer Scudder reviews the issue of corruption and resettlement, and Gørild Heggelund illustrates related challenges with a case study from China. Kathy Shandling and Reinier Lock examine from an industry perspective the potential of public–private partnerships for tackling corruption in hydropower, while Peter Bosshard and Nicholas Hildyard discuss whether corruption leads to a bias towards large-scale hydropower projects.

Water for energy: corruption in the hydropower sector

Lawrence J. M. Haas¹

Hydropower and dams: why they matter

One-sixth of the world's electricity comes from hydropower, and it provides at least a half of the supply in more than sixty countries.² Electricity will probably occupy an even more prominent place on the global energy scene in the decades to come. As demand for power continues to grow globally, so do pressures to increase the share of electricity generated from non-fossil sources, in order to address the many environmental and socio-political problems associated with oil and coal, cut climate-changing emissions and make electricity more accessible to the more than 1.6 billion people who currently go without.³ Equitable access to electricity is a central theme in the development debate, and lack of energy services can negatively affect the prospects for realising sustainable development and achieving the Millennium Development Goals.

Any discussion about hydropower invariably leads to the debate about large dams and the role they play in the provision of water, energy and related services. Corruption features

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2 WCD, *Dams and Development: A New Framework for Decision-making* (London: Earthscan Publications, 2000).

3 R. T. Watson *et al.*, 'Climate Change 2001: Third Assessment Report of the Intergovernmental Panel on Climate Change' (Geneva: IPCC, 2001); UN-Energy, 'Energy in the United Nations: An Overview of UN-Energy Activities' (New York: UN-Energy, 2006).

prominently in this debate. There are more than 45,000 large dams in 140 countries, and about two-thirds of them are in the developing world, where new construction is also heavily concentrated. In China's Yangtze River basin alone, 105 large dams are planned or under construction.⁴ Of course, dams are not only about electricity, as more than a third have multiple purposes – making the stakes and the corruption risks even higher. Dams help cope with variabilities in rainfall, drought and other hydrological factors, and serve as vital instruments for water supply and flood management. And 30–40 per cent of the 271 million hectares of irrigated land worldwide rely on dams.⁵

Dams are also the infrastructure projects that most fundamentally affect human settlement patterns, livelihoods, health and the environment. They impound about 14 per cent of all global water run-off. And, together with canals and diversions, they fragment 60 per cent of the world's 227 largest rivers, with the remaining free-flowing rivers in the developing world also subject to a high rate of dam construction.⁶

If poorly designed or managed, dams can harm valuable ecosystems and biodiversity as well as provide breeding grounds for waterborne diseases.⁷ Irrespective of the benefits, the impacts on human livelihoods are also profound. The World Commission on Dams estimated in 2000 that between 40 and 80 million people had been displaced by dams in the previous fifty years.⁸ And governments and project managers have frequently reneged on promises to provide resettlement assistance and other aid to those adversely affected by hydropower projects.⁹

All this makes hydropower and dams central in the debate about the blueprint for a sustainable future. To maximise sustainability and minimise corruption, the building of dams requires that up-front strategic assessments are made that mobilise all the available options to meet today's challenges in water and energy service provision. Hydropower also requires a better integration of governance reforms, to ensure that all stakeholders have a voice to inform decision-making. Improving sustainability in all stages of the infrastructure project cycle will help provide for the security of livelihoods, social and economic well-being, energy, the environment and the climate – while corruption can significantly disrupt this at many levels.

Money and complexity: why hydropower is a high-risk sector for corruption

Huge budgets and opportunities to hide unseemly practices within complex administrative systems are the main drivers of corruption in hydropower projects. Of the US\$11.1 trillion the world is predicted to spend on energy infrastructure between 2005 and 2030, US\$1.9 trillion

4 United Nations Environment Programme (UNEP), *Global Environment Outlook no. 4: Environment for Development* (Nairobi: UNEP, 2007).

5 WCD, 2000.

6 UNEP, 2007 (*Global Environment Outlook no. 4*).

7 WCD, 2000.

8 *Ibid.*

9 See articles starting on pages 96 and 99.

may be expected to go toward hydropower.¹⁰ These large numbers create multiple opportunities for bribery, fraud and other forms of corrupt behaviour.¹¹ Civil works contracts are typically the largest budget line, accounting on average for 60 per cent or more of total project costs, making dam construction a primary target for corruption. As other contributions to the *Global Corruption Report 2008* indicate,¹² resettlement costs can also be significant and offer entry points for embezzlement and other forms of corruption.

Several ministries are typically involved in hydropower projects, especially in large multi-purpose projects with major land acquisition and resettlement components, and related infrastructure such as access roads and tunnels. The result is complexity and opaque oversight mechanisms. Even with a single coordinating body, numerous opportunities exist for miscommunication, institutional disconnect and inadequate cooperation among government departments and agencies. Combined with a lack of transparency, this provides fertile ground for manipulation and abuse.¹³

Complexity on the institutional side is mirrored by complexity in contracting. The many contracts required for equipment, materials, construction, management and consultancies are often joint ventures involving several companies, frequently with a mix of domestic and foreign-based firms. In Laos, for example, the financing consortium for the US\$1.45 billion Nam Theun 2 Project involves twenty-six separate financial institutions, including private companies and banks, several public institutions and the Lao government, each with its own accountability requirements.¹⁴

The risk of policy capture is also very real in hydropower projects, where vested interests unduly influence decisions about the mix of water and energy service options the society chooses. Without adequate compensation measures for affected people benefits and risks stand to be extremely unequally distributed. While urban or industrial consumers and the dam industry gain, often local communities bear a disproportionate share of the cost of hydropower and other large dams. They can be very detrimental to small upstream landowners, displaced communities and other economically and politically disadvantaged people, who often live in remote mountainous rural areas where many potential sites for large dams are located.¹⁵ This requires extra efforts to ensure that all stakeholders are considered in the decision-making process.

10 International Energy Agency (IEA), *World Energy Outlook 2006* (Paris: IEA, 2006). If hydropower maintains the current 16.9 per cent share of global energy generation, this translates into a US\$76 billion average annual investment in hydropower. This is adjusted downward to use US\$50–60 billion due to the cost of hydropower relative to other types of power generation.

11 See also the article starting on page 103 for a bias towards large projects, because they provide better opportunities for high-level officials to extract rents.

12 See articles starting on pages 96 and 99.

13 M. H. Wiehen, 'Transparency and Corruption Prevention on Building Large Dams', paper for WCD, 26 December 1999; see dams.org/docs/kbase/contrib/ins204.pdf.

14 Nam Theun 2 Hydroelectric Project, www.namtheun2.com.

15 For example, with the thirty-four large dams in India, tribal communities – politically marginalised groups that comprise only 8 per cent of India's population – constitute 47 per cent of those displaced. In the Philippines, almost all dams are on the land of indigenous people, who make up less than 10 per cent of the country's population (WCD, 2000).

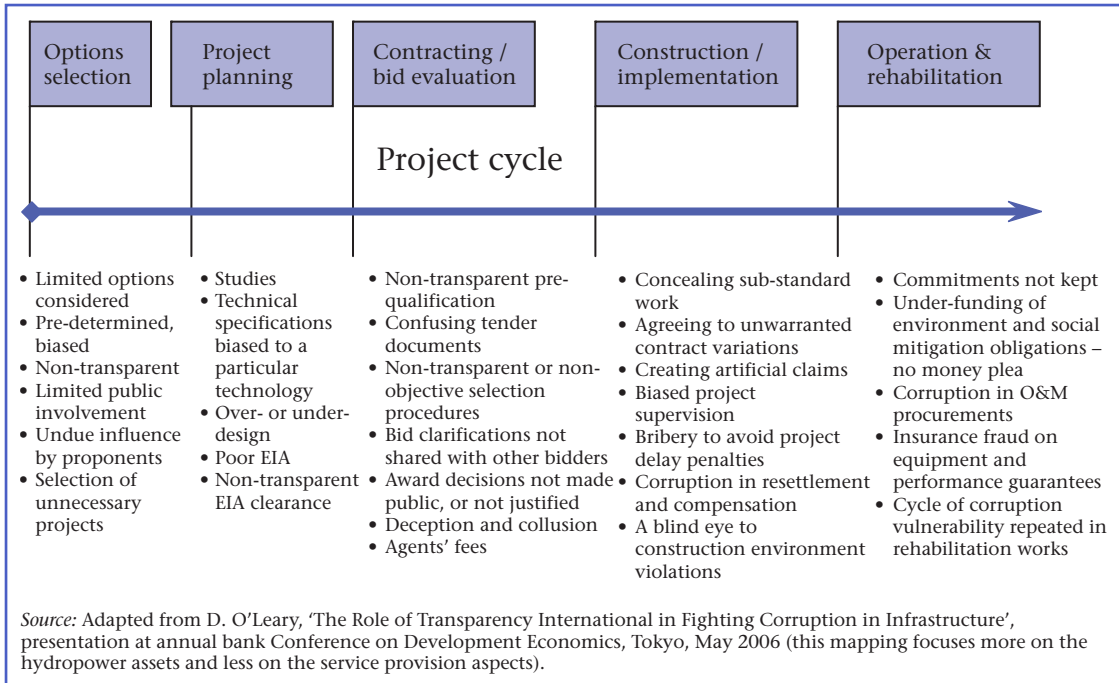


Figure 1 Scope and enabling conditions for corruption in various stages of a project cycle

Forms and effects: what corruption in hydropower looks like

It is widely acknowledged that corruption vulnerabilities in hydropower must be seen through the lens of strategic planning and the project cycle. This means carefully assessing – and tackling – corruption exposures from the early stages of project identification and design, through contractor pre-qualification, tender, construction and operation. Figure 1 illustrates corruption problems that occur along the project cycle.

Corruption risks start with the potential for undue political influence in identifying and selecting hydropower sites, undue outside influence from project developers or inter-departmental collusion in project approval.¹⁶

Bribes and misappropriation of funds have been reported throughout the world. The cost of the joint Paraguayan–Argentinian Yacyretá Dam, started in 1983 and completed only in 1994, ballooned from US\$2.7 billion to US\$11.5 billion.¹⁷ It is widely cited as a 'monument to corruption'.¹⁸

16 Some factors may be considered 'bad practice' rather than direct corruption, but there is a strong overlap with the latter. These also increase the opportunity for corrupt acts, and, equally importantly, they undermine public trust.

17 M. Sohail and S. Cavill, *Accountability Arrangements to Combat Corruption: Synthesis Report and Case Study Survey Reports*, WEDC (Loughborough: Loughborough University, 2007).

18 Ibid.

Grand corruption can occur in the form of bid-rigging and kickbacks in procurement, and kickbacks to accept inflated bills, unit costs and material quantities in contracts. These illicit payments are often disguised by channelling them through agents or subcontractors.

Irregularities with environmental impact assessments can arise during the planning phase. In India, for example, an accounting firm commissioned to conduct an EIA for two dams was caught in 2000 copying 'word for word' large sections of an EIA for a different project 145 kilometres away. After a civil society watch group spotted the plagiarism and posted the information on its website, the contractor said it would rewrite the document.¹⁹

Vulnerabilities continue during project operation and maintenance. These can include endemic petty corruption related to service access and provision, the misappropriation or misuse of fees, illegal connections, failure to honour social and environmental mitigation commitments, patronage and abuse of funds in resettlement activities, and failure to honour monetary and non-monetary benefit-sharing. The cycle of grand corruption can start all over again with procurement for maintenance, refurbishment and upgrading contracts (see figure 1).

The benefits from tackling corruption that would flow to people and the environment are considerable by any measure. Direct cost savings may start at US\$5–6 billion annually, if just the average 10 per cent reduction in contractor bid prices achieved through integrity pacts pioneered by Transparency International were extrapolated to all planned hydropower projects.²⁰

If corruption leads to cost overruns that eat into funds originally earmarked for maintenance, proper functioning may be put at risk, reducing the long-term benefits. Corruption can also hamper the expansion of electricity services in developing countries, by driving up costs, delaying projects and lowering service quality and reliability, especially in rural areas considered low priorities. Higher electricity prices disproportionately affect the poor and vulnerable, retarding poverty reduction efforts. In Montenegro, for example, poor households spend more than twice as much of their budget on electricity as higher-income households – 12.9 per cent versus 5.2 per cent.²¹ This poverty gap is much greater in Africa and Asia, where the social impacts of tariff increases can spark demonstrations, as in Nepal.²²

More dramatically, corruption also amplifies the adverse effects that hydropower projects have on ecosystems, which many people at subsistence levels in developing countries rely on for their daily livelihoods and health. In fact, the WCD emphasises negative impacts on ecosystems and affected communities as two of the most serious failings of existing dams.²³

Finally, chronic corruption ultimately undermines public trust and the political sustainability of hydropower as an option for societies to consider. Many would-be investors melt away

19 Public Services International, 'Water Privatisation, Corruption and Exploitation', 20 August 2002; see www.indiaresource.org/issues/water/2003/waterprivatizationpsi.html; Associated Press, 'Ernst & Young rewriting dam report', 3 September 2000.

20 See, for example, the use of integrity pacts in Mexico, from page 95.

21 P. Silva et al., 'Poverty and Environmental Impacts of Electricity Price Reforms in Montenegro', Policy Research Working Paper no. 4127 (Washington, DC: World Bank, 2007).

22 B. Bhadra, 'Hydro-energy for National Development: Small and Medium Hydro Electricity Development Issues', *The Weekly Telegraph* (Nepal), 30 January 2002; *Kathmandu Post*, 'Tariff hike again?', 31 March 2001.

23 WCD, 2000.

Table 4 Why fighting corruption is a long-term interest of all stakeholders

Stakeholder group	Corrosive effects of corruption
Electricity consumers ²⁴	<ul style="list-style-type: none"> • Less affordable and reliable electricity • Less access for the poor • Slower pace of service expansion
Impacted communities	<ul style="list-style-type: none"> • More high-impact or 'bad' projects • Higher adverse livelihood impacts and impoverishment risks • Fewer funds for compensation, mitigation and benefit-sharing • Fewer mitigation commitments for sustainable management
Electricity utilities	<ul style="list-style-type: none"> • Higher costs of bulk energy or own supply • Higher borrowing and equity costs • Less money for service expansion and improvement • Delayed, overpriced or expensive infrastructure
Governments	<ul style="list-style-type: none"> • Higher power sector costs • Higher repayments for sovereign loans or guarantees • Setbacks for social policies • Slower economic growth and job creation for projects that depend on improved electricity service
Public hydropower developers/ operators and IPPs ²⁵	<ul style="list-style-type: none"> • No level playing field for fair competition • Approvals procured through bribes can be rescinded, terminating the project • Disqualification from office or criminal prosecution
Contractors and equipment suppliers	<ul style="list-style-type: none"> • Distorted and unfair competition • Higher and wasted tender expenses • Approvals procured through bribes can be rescinded, terminating the project • Criminal prosecution, fines, blacklisting and loss of reputation
Financiers: ECAs, MDBs, ²⁶ commercial banks, credit agencies and insurers	<ul style="list-style-type: none"> • Higher reputation risks if corruption is proven • Higher than necessary requests for borrowing • Additional costs and fraudulent claims • Financial loss

24 For multi-purpose projects, consumers include irrigators and urban water users in cities, or any groups that would benefit from reducing corruption in water and energy provision from multi-purpose dams.

25 'IPP' stands for 'independent power producer'.

26 'ECA' stands for 'export credit agency' and 'MDB' stands for 'multilateral development bank'.

as concerns about reputation risks and other costs of corruption arise. Table 4 summarises the impact of corruption on hydropower.

Moving towards action

[T]he end of any dam project must be the sustainable improvement of human welfare... If a large dam is the best way to achieve this goal, it deserves support. Where other options offer better solutions, we should favour them over large dams. (World Commission on Dams)

A changing governance landscape

Far-reaching changes in the power and water sector mean that the governance framework for hydropower has also undergone a transition. This provides new risks for corruption but also new entry points for fighting it. In the energy sector, private financiers and operators assume a bigger role. Meanwhile, water resources management has shifted to a more inclusive and participatory approach that recognises more strongly the linkages between hydrology, human geography and the environment.

Taken together, this means more stakeholders around the hydropower table, and more need and opportunities for coordination and participation. It also means more complex risk- and responsibility-sharing arrangements between public and private actors that provide new entry points for corruption, but also new levers to make accountability structures and decision-making more transparent and inclusive.

The case for a common cause

Tackling corruption in such a setting requires forging anti-corruption coalitions between all stakeholders to create momentum for change, as well as establishing a web of checks, balances and trust that makes the fight against corruption effective.

A first step is to demonstrate convincingly that tackling corruption can benefit all stakeholders. Combating corruption is plainly in the interests of electricity consumers, governments, the hydropower industry, public and private financing bodies and, especially, the more than 1.5 billion people who today have no access to affordable electrical services. Although polarised views about hydropower remain part of today's dialogue on sustainable development, a constructive collaboration is building between industry, environment and social interests. For example, the WWF and International Hydropower Association (IHA) intend to work together to improve sustainability guidelines for hydropower projects.²⁷

Opening decision-making

The World Commission on Dams remarked in 2000 that 'at the heart of the current debate on dams is the way choices are made, and the different opinions and perspectives that are expressed – or denied expression – in the process'. The WCD proposed a 'rights and risks' approach to identify all legitimate hydropower stakeholders, including involuntary risk absorbers such as displaced communities. Today there is more guidance available on how to undertake inclusive options assessments and move it upstream into strategic planning processes.²⁸ As the WCD observed, this helps mobilise all possible options not only to meet

27 The IHA and WWF, along with four other partners, are about to announce a two-year initiative to field test and revise the Sustainability Guidelines of Hydropower that the IHA has promoted since 2002.

28 K. Blok *et al.*, 'Stakeholder Involvement in Options Assessment: Promoting Dialogue in Meeting Water and Energy Needs' (Washington, DC: World Bank, 2003).

growing water challenges, but also to address the real and perceived biases in how non-dam options are taken up or rejected.

Fighting corruption from the project finance side

The high capital costs and long payback periods of large-scale hydropower make financing an important factor for success and a powerful lever for fighting corruption. Accountability can be promoted through committed project financiers, adequate financing instruments and sound revenue-sharing governance.

Multilateral development banks and bilateral donors. Though many international donors are stepping up governance and anti-corruption activities, some specific measures have yet to be built into donor-supported hydropower projects, such as governance improvement plans.

Export credit agencies. ECAs provide export credit guarantees and insurance for electrical and mechanical equipment exporters. In 2006 the OECD Council adopted recommendations to deter supply-side bribery in official assistance – including increased disclosure and no-bribery undertakings and sanctions – as a prerequisite for companies to obtain ECA support.²⁹ This is a good first step, but shared definitions of standards of proof, due diligence and enhanced due diligence, and information disclosure are still needed.³⁰ Moreover, anti-corruption measures by non-OECD country ECAs must be better harmonised.³¹ China's Export-Import Bank, for example, is one of the world's largest ECAs, with primary commercial operations reportedly exceeding those of the United States, Japan and the United Kingdom. It is heavily involved in hydropower projects.³²

Private commercial banks. Introduced in 2002, the Equator Principles provide a common framework for commercial banks to apply their own corporate responsibility charters, and social and environmental standards in project finance lending to infrastructure, including hydropower.³³ The Equator Principles financial institutions (EPFIs), which represent more than 80 per cent of commercial lending in infrastructure globally, have agreed not to provide

29 OECD, 'OECD Recommendation to Deter Bribery in Officially Supported Export Credits' (Paris: OECD, 2006).

30 Transparency International, 'Export Credit Agencies'; see www.transparency.org/global_priorities/public_contracting/instruments/export_credit_agencies.

31 Article 3 of the 2006 OECD Council recommendation encourages non-OECD members that are parties to the OECD Anti-Bribery Convention to adhere to the provisions of the recommendation. The stated aim is to level the playing field among all providers of official export credits. On 21 November 1997 OECD member countries and five non-member countries, Argentina, Brazil, Bulgaria, Chile and the Slovak Republic, adopted the Convention on Combating Bribery of Foreign Public Officials in International Business Transactions.

32 S. Rose, 'China's ExIm Bank Discloses Its Environmental Policy', blog entry, Center for Global Development, 11 May 2007; see blogs.cgdev.org/globaldevelopment/2007/05/chinas_exim_bank_discloses_its.php. See also the website of the Export-Import Bank of China, english.eximbank.gov.cn, and P. Bosshard and M. Chan-Fishel, 'A Case of Environmental Money Laundering', International Rivers Network and Friends of the Earth, 21 July 2005, www.irn.org/programs/finance/index.php?id=050721exim.html.

33 'Equator Principles: A Financial Industry Benchmark for Determining, Assessing and Managing Social and Environmental Risk in Project Financing'; see www.equator-principles.com/principles.shtml.

loans to borrowers that do not comply with the principles.³⁴ The principles are criticised, however, for their lack of explicit, binding standards that comply with international law in relation to the environment, human rights, indigenous peoples and labour.³⁵ They also lack transparency in how EPFIs ensure their borrowers actually comply with the principles.³⁶

Private equity. Private equity groups are increasingly taking the lead on independent power producer hydropower in Asia and Africa, such as the acceleration of hydropower IPPs in South-east Asia's Mekong region.³⁷ This is a highly positive trend, because developing countries can attain greater access to financing. But it highlights the growing gap between what a consensus of public international financing bodies require as safeguard policies and what private international equity groups and ECAs of non-OECD countries require – what the media have criticised as a 'no strings' policy for infrastructure lending.³⁸

Transparency in contractual arrangements and risk-sharing

New contractual frameworks provide more flexibility for sharing responsibilities and risks in hydropower projects. Transparency on how decisions come about, how risks are calculated and how responsibilities are shared are indispensable for all these new contractual relationships. Clear transparency guidelines are essential not only to prevent and correct corruption, but also to restore the public confidence in responsible hydropower governance that otherwise threatens to make hydropower politically unfeasible. Lessons can be drawn from recent controversies about power purchase agreements (PPAs), such as the 250 MW Bujagali project in Uganda. In 2002 Uganda's High Court had to order the public release of the PPA at the urging of NGOs, because the government had failed to make the information public.³⁹ The PPA between the new project sponsor and the government of Uganda is now available to the public.⁴⁰

Building transparency and accountability into new financing and revenue-sharing frameworks

Revenue-sharing for hydropower projects and carbon-trading schemes, such as the Kyoto Protocol's Clean Development Mechanism (CDM), are examples of emerging financing mechanisms that are strategically important to advance sustainable forms of hydropower

34 The Equator Principles were revised in 2006 to align with the updated, International Finance Corporation (IFC) Performance Standards on Social and Environmental Sustainability; see www.ifc.org/ifcext/enviro.nsf/Content/EnvSocStandards.

35 Bretton Woods Project, 'From bad to worse: IFC safeguards', 13 June 2005.

36 R. Bailey *et al.*, 'Building Sustainability into Syndication', *Environmental Finance*, July/August 2006.

37 P. King, *et al.*, 'Joint Program on Environment Criteria for Hydropower Development in the Mekong Region', a joint initiative of the Asian Development Bank, Mekong River Commission and World Wildlife Federation, March 2007.

38 *BBC News* (UK), 'China Defends Its Role in Africa', 16 May 2007; S. Rose, 2007.

39 A. T. Balinda and F. C. Oweyegha-Afunaduula, 'Nape's Contribution to Environmental Advocacy in the Nile Basin: Bujagali Power Project, Uganda', presentation at the third World Water Forum, Kyoto, March 2003.

40 See go.worldbank.org/UTHNPOSSD0.

development. The CDM allows industrialised countries with a greenhouse gas reduction commitment to invest in projects that reduce emissions in developing countries, up to certain limits.⁴¹ The CDM has supported hydropower projects that meet eligibility criteria, though some policy and advocacy groups contest the inclusion of large hydropower projects which they consider unsustainable.⁴² Rejections of applications to the CDM, such as the Bumbuna Hydropower Project in Sierra Leone, suggest a need to clarify transparency procedures. And the CDM still has no formal appeal mechanism.

Local revenue-sharing

Encouraged by the World Commission on Dams, many countries now allow local communities to receive a monetary share of project revenues when they give up their land or natural resources, but examples are still few and far between.⁴³ A sustainable financing source to fund environmental and social commitments can go a long way towards addressing many accountability concerns in hydropower, such as governments delivering on promises when they have no real financial capacity to do so. But, at the same time, they can fuel controversy in the absence of adequate provisions for transparency and accountability.

In Sierra Leone, endemic corruption contributed to the eleven-year rebel war that formally ended after national elections in 2002. In post-war reconstruction, proposals to introduce revenue-sharing on the war-delayed Bumbuna hydropower project, mentioned above, were widely endorsed by local people and the newly elected local government. Measures to ensure transparency and social accountability in revenue-sharing arrangements will be evaluated in the set-up phase of the Bumbuna Trust. A multi-stakeholder board will oversee the trust and will help Sierra Leone meet its long-term commitments to affected populations and the environment through a wide range of community projects for poverty reduction, development and environmental protection.⁴⁴ Some form of carbon financing and the electricity tariffs will provide sustainable financing for the trust.

Strengthening project and sectoral governance

Governance improvement plans (GIPs) in hydropower projects can help elevate anti-corruption measures to a strategic focus of project management. GIPs can integrate a comprehensive package of anti-corruption tools, including risk-mapping, integrity pacts, formal compliance plans and disclosure standards for all project elements. They have already

41 'Clean Development Mechanism'; see www.cdm.unfccc.int.

42 See SinksWatch, www.sinkswatch.org/pubs/CDM%20Report_English.pdf, and 'Carbon Trading: A Critical Conversation on Climate Change, Privatisation and Power', *Development Dialogue*, no. 48 (Uppsala, Sweden: Dag Hammarskjöld Foundation, 2006).

43 T. Scudder, *The Future of Large Dams: Dealing with Social, Environmental, Institutional and Political Costs* (London: Earthscan Publications, 2005).

44 See www.wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2005/04/21/000012009_20050421154222/Original/Backup0of0Bumb1praisal0Draft1041505.wbk.doc.

proved effective in other infrastructure sectors, such as road improvement projects in Paraguay and Indonesia.⁴⁵

As far as the donor community is concerned, because only a small number of hydropower projects are donor-supported, action at the national and sectoral levels is crucial. Tools include ethical codes of conduct for key officials, as well as asset declaration and the publication of representation limits for senior staff in public hydropower companies.⁴⁶

Momentum for governmental anti-corruption reforms can also come from international anti-corruption agreements. Most of the top ten hydropower countries are signatories to UN or regional conventions on bribery and corruption. Although often legally binding, implementation remains a big challenge and provides opportunities for more targeted public pressure on governments to live up to their commitments and also recognise hydropower as a high-corruption risk sector.

Private companies working in hydropower can do their share by implementing effective anti-corruption policies, following guidelines such as Transparency International's Business Principles for Countering Bribery.⁴⁷ They can also work towards sectoral anti-corruption standards that promote trust in fair play and further reduce corruption risks. The International Hydropower Association (IHA), for example has prepared sustainability guidelines that can serve as a model for developing a voluntary set of anti-corruption guidelines.⁴⁸

Civil society organisations can provide important additional checks and balances through independent monitoring and mobilising community participation in hydropower decision-making.

In order to make public monitoring possible in the first place, the entire hydropower sector must be brought fully under freedom of information regulations to ensure the public disclosure of project documents and budgets.

The power of using the tools at hand

Fortunately, many tools are available to tackle corruption in hydropower – such as corruption risk assessments, integrity pacts, compliance plans and anti-corruption conventions. Too often, however, these tools remain on the shelf.

Integrity pacts for public procurement, for example, have achieved significant savings on several dam projects.⁴⁹ In 2002 Mexico's Federal Electricity Commission (Comisión Federal de

45 L. Haas *et al.*, 'Setting Standards for Communications and Governance: The Example of Infrastructure Projects', Working Paper no. 121 (Washington, DC: World Bank, 2007).

46 *Ibid.*

47 Transparency International, 'Business Principles for Countering Bribery', www.transparency.org/global_priorities/private_sector/business_principles.

48 International Hydropower Association, 'IHA Sustainability Guidelines Adopted', www.hydropower.org/sustainable_hydropower/sustainability_guidelines.html.

49 Integrity pacts are voluntary agreements that identify the steps that all parties in a project will take, individually and collectively, to reduce or eliminate corruption, backed by independent oversight and monitoring. The integrity

Electricidad – CFE) began working with TI Mexico to test an integrity pact for public procurement on the 750 MW El Cajón hydroelectric project. Bidders were required to sign a unilateral declaration of integrity, and similar declarations were made by CFE officials and all the government officials involved in the bidding process. A social witness (*testigo social*) was employed to oversee contracting and report the results to civil society groups and the public. The accepted bid was reduced by 8.5 per cent – P675 million (US\$64 million) less than the CFE had expected based on past bidding trends.⁵⁰

Concerted action to roll back corruption in hydropower needs collaboration, a time-bounded strategy and measurable indicators of progress – all of which are quite possible with existing tools and levels of stakeholder commitment. Corruption is not only a serious cost factor. It is a serious blockage to realising the benefits of hydropower for everyone, and it fatally undermines what is already very fragile public confidence in the sector in many countries. Fighting corruption in hydropower is therefore indispensable for a sustainable energy future that maximises the benefits of renewable sources.

Footnote 49 (*cont.*)

pact has shown itself to be adaptable to many legal settings and flexible in its application. See www.transparency.org/global_priorities/public_contracting/integrity_pacts.

⁵⁰ See L. Haas *et al.*, 2007.

Hydropower corruption and the politics of resettlement

Thayer Scudder¹

Though the supplier of immense economic resources in the form of water and energy, hydroelectric dams have inflicted a heavy toll on humanity – especially populations with little financial or political power. Up to 80 million people have been displaced by the world’s dams, as many as 58 million in China and India between 1950 and 1990 alone.²

These resettlers are usually poor ethnic minorities or indigenous people who, rather than benefiting from hydro-projects, become the major risk-takers and are further impoverished economically, institutionally and culturally.³

Though it has seldom been documented,⁴ corruption is a major cause of impoverishment for resettlers who fail to receive promised compensation and development benefits. These corrupting agents have taken many forms.

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² World Commission on Dams (WCD), *Dams and Development: A New Framework for Decision-making* (London: Earthscan Publications, 2000).

³ On impoverishment, see T. Scudder, *The Future of Large Dams: Dealing with Social, Environmental, Institutional and Political Costs* (London: Earthscan Publications, 2005), and C. McDowell (ed.), *Understanding Impoverishment: The Consequences of Development-induced Displacement* (Oxford: Berghahn Books, 1996).

⁴ Although the World Bank has published more on development-induced involuntary resettlement than other organisations, sections on corruption do not occur; indeed, the word ‘corruption’ does not occur in the index of

- Mauritians living downstream from the Manantali Dam suffered from national land registration laws that ignored their customary tenure, making it easier for their valuable property to be forcibly acquired.⁵
- Governments have failed to observe agreed-upon policies designed to benefit resettler households, such as Sri Lanka's Accelerated Mahaweli Project.⁶ They have refused to provide required replacement land, as with India's Sardar Sarovar Project.⁷ And they have ignored treaty obligations, as with the Lesotho Highlands Water Project.⁸
- Officials have stolen resettlement funds, as with China's Three Gorges Dam.⁹
- Engineering and other firms have reneged on promises or otherwise cheated resettlers, as with India's Maheshwar Dam.¹⁰
- Government and private individuals have used corrupt practices to acquire choice reservoir sites reserved for resettlers and/or forest, wildlife and other reserves (Lesotho and hydro-projects in Thailand and Kariba, Zambia) as well as other dam-related opportunities, such as fisheries and aquaculture reserved for resettlers (Indonesia's Cirata reservoir).¹¹
- Politically influential resettlers can monopolise community- or kin-based land, as with Sardar Sarovar and Kariba.¹²
- Donors are slow in following research-supported best practices that require their resettler safeguard policies to include both compensation and livelihood development.¹³ They have been hesitant to hold staff accountable, through reprimands, salary penalties or demotions. Nor have they cracked down on countries that do not comply with safeguard policies, as with the World Bank's involvement in India's Sardar Sarovar Project, and cases brought before the World Bank's Inspection Panel (Argentina and Paraguay's Yacyretá Dam) and IFC's Compliance Adviser/Ombudsman (Chile's Pangué Dam).¹⁴

Footnote 4 (cont.)

the bank's *Involuntary Resettlement: Comparative Perspectives* (2001) or *Involuntary Resettlement Source Book: Planning and Implementation in Development Projects* (2004).

5 M. M. Horowitz, 'Victims upstream and down', *Journal of Refugee Studies*, vol. 4, no. 2 (1991).

6 T. Scudder, 2005.

7 B. Morse and T. Berger, *Sardar Sarovar: The Report of the Independent Review* (Ottawa: Resource Futures International, 1992).

8 T. Scudder, 'Assessing the Impacts of the LHWP on Resettled Households and Other Affected People 1986–2005', in M. L. Thamae and L. Pottinger (eds), *On the Wrong Side of Development: Lessons Learned from the Lesotho Highlands Water Project* (Maseru, Lesotho: Transformation Resource Centre, 2006); 1989–1991 and 1995 reports prepared by the Panel of Environmental Experts for the Lesotho Highlands Development Authority.

9 WCD, 2000.

10 R. E. Bissell *et al.*, 'Maheshwar Hydroelectric Project: Resettlement and Rehabilitation – An Independent Review Conducted for the Ministry of Economic Cooperation and Development (BMZ), Government of Germany', 15 June 2000.

11 T. Scudder, Field Notes on Lesotho, Thailand and Kariba; for Saguling, see B. A. Costa-Pierce, 'Constraints on the Sustainability of Cage Aquaculture for Resettlement from Hydropower Dams in Asia: An Indonesian Case Study', *Journal of Environment and Development*, vol. 7, no. 4 (1998).

12 T. Scudder, Field Notes on Sardar Sarovar and Kariba.

13 World Bank, 'Recent Experience with Involuntary Resettlement: Overview', Operations Evaluation Department, Report no. 17538 (Washington, DC: World Bank, 1998).

14 Inspection Panel, World Bank Group, 'Argentina: World Bank Board Discusses Yacyreta Hydroelectric Project', press release, 7 May 2004; IFC, 'Assessment by the Office of the Compliance Adviser/Ombudsman in Relation to a Complaint Filed against IFC's Investment in ENDESA Pangué S.A.' (Washington, DC: IFC, 2003).

No easy fix

Competently resettling displaced people is arguably the most complex and contentious job associated with hydro-projects.¹⁵ As the world's leader, with 22,000 large dams, China has been recognised for its efficient resettlement policies. Nonetheless, the Three Gorges Dam's million-plus-person resettlement project gave rise to the largest such corruption scandal on record, with officials stealing ¥375 million (US\$50 million).¹⁶ That said, here are some suggested remedies.

- The World Bank correctly states that the first priority is reducing the number of displaced people. Options assessments must include a risk and distributional analysis to limit the construction of large dams with significant resettlement burdens.
- Resettlement should be financed as a separate project – as with the World Bank's Xiaolangdi Project in China – to increase accountability, improve outcomes and deter corruption.¹⁷
- Performance bonds and insurance relating specifically to resettlers can deter corruption, as can trust funds created specifically for poverty alleviation.¹⁸
- When resettlement is necessary, resettlers and their institutions should participate in planning, budgeting, implementing and evaluating compensation and livelihood development programmes. This can improve outcomes significantly¹⁹ and, potentially, reduce corruption.
- Displaced citizens should become major stakeholders in benefit-sharing, such as the co-ownership arrangement with Canada's Minshatuk Dam, China's 'remaining problems fund', which stimulates development with hydropower revenues, Brazil's revenue-sharing and Japan's land-leasing.²⁰

15 A. Biswas and C. Tortajada, 'Development and Large Dams: A Global Perspective,' *Water Resources Development*, vol. 17, no. 1 (2001); R. Goodland, 'Ethical Priorities in Environmentally Sustainable Energy Systems: The Case of Tropical Hydropower', in W. R. Shea (ed.), *Energy Needs in the Year 2000: Ethical and Environmental Perspectives* (Canton, MA: Watson Publishing International, 1994).

16 See article starting on page 99.

17 World Bank, 'Implementation Completion Report (IDA-26050) for the Xiaolangdi Resettlement Project', Report no. 29174 (Washington, DC: World Bank, 2004).

18 On performance bonds and trust funds, see WCD, 2000. While performance bonds should address the resettlement process directly, trust funds financed from project revenue, as in the Lesotho Highlands Water Project and Laos's Nam Theun 2 Project, focus more on national poverty alleviation. On insurance modelled on workman's compensation, see T. Downing, 'Avoiding New Poverty: Mining-induced Displacement and Resettlement', *Mining, Minerals and Sustainable Development*, no. 58 (2002). On social insurance resettlement in China, which draws resettlers into the social insurance system by providing medical insurance and old age insurance, see Asian Development Bank (ADB), 'Capacity Building for Resettlement Risk Management: People's Republic of China', PRC Thematic Report no. 3, *Improving Resettlement Policies and Practice to Manage Impoverishment Risk* (Manila: ADB, 2006).

19 T. Scudder, 2005.

20 D. Egrè *et al.*, 'Benefit Sharing from Dam Projects – Phase 1: Desk Study' (Montreal: Vincent Roquet & Associates, for the World Bank, 2002); M. M. Cernea, 'Financing for Development: Benefit Sharing Mechanisms in Population Resettlement', *Economic and Political Weekly*, vol. 42, no. 12 (2000).

- Resettlement responsibilities and financing should be delegated to resettler communities and institutions, such as the resettler housing and infrastructure projects associated with Uruguay's Itá Dam. Resettler communities should receive help to develop new institutions, such as cooperatives to invest funds for common property resources (Lesotho) and fisheries co-management (Laos's Nam Theun 2).²¹
- Resettlement policies should require funding for both compensation and development, as with Laos's Nam Theun 2.²²
- International, national and private financing agencies should levy sanctions against staff and offending countries for failing to comply with best practices. These include independent, publicly reported monitoring and evaluation by experts, NGOs and/or private sector firms. This monitoring must be conducted throughout the project cycle, beginning with pre-project benchmark surveys and continuing into the operational phase.
- An International Arbitration and Compliance Board should be formed, in order for stakeholders to file appeals.

21 C. Bermann, 'Community-managed Resettlement: The Case of Itá Dam', submission abstract for the second WCD regional consultation (São Paulo: WCD, 1999); T. Scudder, Field Notes on Lesotho Highlands Water Project and Laos' Nam Theun 2 Dam Project.

22 Nam Theun 2 Hydroelectric Project, 'Social Development Plan', vol. 2 (2005). Compensation alone lends itself to corruption, since it is usually the responsibility of local officials and difficult to monitor as it involves individual households. The utilisation of development funds for entire communities, social infrastructure, and livelihood is more easily monitored.

The disappearance of homes and money: the case of the Three Gorges Dam

Gørild M. Heggelund¹

When it is finally completed, perhaps by 2009, the Three Gorges Dam will be the largest river-based hydropower project in the world. Stretching more than 2 kilometres across the Yangtze River, China's longest waterway, the dam also led to the largest resettlement project in dam-building history. Originally estimated at 1.13 million, the number of people displaced by the dam reached 1.4 million in 2007. Resettlement expenditures have been estimated at one-third of the total project cost of ¥200 billion (US\$26 billion).

The embezzlement of resettlement funds by Chinese government officials has emerged as one of the main hindrances to resettling displaced people. In 2005 dam officials

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announced that 349 people had been convicted for misusing resettlement funds since construction began in 1994. By the end of 2003 ¥58.7 million (US\$7.1 million) had been embezzled, misappropriated or illegally used. Of that, ¥43 million (US\$5.2 million) had been recovered, and all the embezzlers, including 166 officials, had been ‘severely punished’.²

This endemic corruption has caused numerous problems. Resettlement compensation has been reduced, the quality of life for displaced people has suffered and migrants have protested at the corruption and a lack of adequate compensation, leading to arrests of demonstrators. In July 2006 residents of Hubei Province protested at a local government office because they had received only ¥5,000 (US\$700) of the promised ¥38,000 (US\$5,000) in up-front ‘settlement fees’ for having their land expropriated.³

Fighting corruption in resettlement: a steep learning curve

Resettlement regulations approved in 1993 decentralised the Three Gorges resettlement authority, placing responsibility at the provincial, county and local levels.⁴ While viewed as a positive step towards improving efficiency, decentralisation has also provided opportunities for local governments to engage in mismanagement and corruption.⁵ These challenges prompted the authorities to reform their resettlement policies and take additional measures to strengthen governance.

New resettlement regulations the State Council approved in 2001 banned spending resettlement funds on non-resettlement projects or investments, or on purchasing bonds and stocks.⁶ Comprehensive accounting and auditing systems were established, management and expenditure operations were separated, and control of resettlement construction projects was strengthened.

Chongqing Municipality established an auditing network in 2001 consisting of a three-step control system called *shiqian*, *shizhong*, *shihou* (meaning before, during and after the event is implemented).

2 *China Daily* (China), 29 March 2005.

3 *China Daily* (China), 29 April 2007; *Chinese Sociology and Anthropology*, ‘Popular Petitions Protesting Corruption and Embezzlement by Local Governments in the Regions of the Three Gorges Dam Project, 1997 and 1998’, vol. 31, no. 3 (1999); *AsiaNews* (Italy), 12 July 2006; K. Haggart, ‘Five Years in Wuhan Women’s Prison for Requesting Fair Treatment’, *Three Gorges Probe*, 4 October 2005.

4 World Bank, ‘Resettlement and Development: The Bankwide Review of Projects Involving Involuntary Resettlement 1986–1993’ (Washington, DC: World Bank, 1996); World Bank, ‘Recent Experience with Involuntary Resettlement: China – Shuikou’, Report no. 17539 (Washington, DC: World Bank, 1998); G. Heggelund, *Environment and Resettlement Politics in China: The Three Gorges Project* (London: Ashgate Publishing, 2004).

5 See an overview of the disbursement system in L. Heming, ‘Population Displacement and Resettlement in the Three Gorges Reservoir Area of the Yangtze River Central China’, PhD dissertation, University of Leeds, School of Geography, 2000.

6 Decree of the PRC State Council, ‘The Resettlement Regulations of the Three Gorges Project’, no. 299, Beijing, 25 February 2001.

New management procedures increased the responsibility of resettlement officials, improved the supervision of funding allotments and established regular meetings with local resettlement directors to increase management control over funds.

The control measures have helped uncover additional instances of corruption and misappropriation, indicating that they are working but that corruption risks persist. In January 2007 the National Audit Office reported the misappropriation of ¥272 million (US\$36.4 million) out of ¥9.6 billion (US\$1.3 billion) in resettlement funds for Hubei Province and Chongqing Municipality for the years 2004 and 2005.⁷ The office ordered local authorities to recover the money or else the officials concerned would be 'held responsible'.⁸ The Authorities have also introduced a supervision plan and annual financial reports⁹ that require various units to report their spending regularly.

Despite these measures, challenges to successful management remain,¹⁰ including a lack of transparency and participation. Potential solutions include establishing clear communication channels between resettlers and the authorities to solve problems when they arise and to strengthen institutions that provide legal assistance in resettlement. According to a survey of more than 1,000 households in eleven provinces, integration problems persist and displaced people are confronted with lower incomes, a lack of basic social security and poor opportunities to voice their complaints.¹¹

Three Gorges has been a continuous learning process for fighting corruption in resettlement. The evolving policy responses, if implemented as intended and found to be effective, are potentially very important for the many future dam projects that China plans to undertake. In the Yangtze River basin alone, 105 large dams were planned or under construction in 2007. First and foremost, fighting corruption in dam-related resettlement means minimising the resettlement disruption of livelihoods.

But, when resettlement is necessary, tackling corruption is essential to ensure that displaced people are not punished twice, turning disruption into long-term despair and poverty. Displaced people must be included in post-resettlement capacity building, have more participation in benefit-sharing schemes and be assisted in re-establishing community networks.

7 The Audit Findings on the Funds for Resident Relocation from the Reservoir Region of the Three Gorges Project, National Audit Office of the PRC, no. 1 of 2007, General Serial no. 19. See also W. Jiao, 'Annual Financial Reports for Dam'; *China Daily* (China), 9 September 2007.

8 *China Daily* (China), 11 February 2007.

9 *China Daily* (China), 9 March 2007.

10 *People's Daily* (China), 1 July 2007.

11 P. Fade *et al.*, 'Study on Social Integration and Impact on Stability of Three Gorges Project Re-settlement', available at www.china-yimin.com/show.asp?id=289.

Industry view: public–private hydropower – minimising the corruption risks

Kathy Shandling and Reinier Lock¹

Building and financing hydropower projects in developing countries requires massive investments and the mobilisation of private capital. A number of mechanisms – some new, some to be scaled up – promise to help fill this funding gap and attract long-term investments to the sector. These include private equity, local commercial bank financing and local bond funding, as well as increased use of guarantee/credit enhancement instruments provided by international financial institutions (IFIs), bilaterals and, in some cases, private sector financial players.² But establishing these mechanisms and attracting financiers for hydropower in developing countries presents unique challenges. And risks related to corruption are a central issue.

Learning from failures: aligning expectations and sharing risks in a transparent manner

Recall the 1990s ‘gold rush’ of billion-dollar independent power projects in Asia – Dabhol in India, Paiton I & II in Indonesia, and Hub River and Uch in Pakistan. All were structured as quasi-public–private partnerships (PPPs). And they all failed, for a variety of reasons. The key problems they shared were a lack of transparency and well-defined contracts between all relevant parties, lack of proper legal and regulatory frameworks, mismatched expectations between the international developers and host governments, and currency exchange disconnects.

Towards ‘PPP plus’: transparent roles, transparent sharing of risks and regard for social responsibilities

More is needed than conventional PPPs to overcome these problems. A new ‘PPP plus’ contract should serve as a template to organise viable business partnerships for hydropower projects, in order to address all those issues that contributed to past power project failures. What should a PPP-plus-style contract include?

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2 In October 2007 the World Bank, for example, announced the launch of a global emerging markets fund to channel more of the estimated US\$200 billion invested in emerging markets assets towards local currency bonds that are more suitable to financing long-term infrastructure projects in developing countries; see www.ifc.org/ifcext/pressroom/ifcpressroom.nsf/PressRelease?openform&2242E8BB6FF5A5AF8525736A0053CA0B.

- It should enhance the ability of both the private and public sector project participants to meet corporate social responsibility and anti-corruption standards.
- It should provide a well-structured compact between public and private players that defines precisely the respective roles of all stakeholders and their relationships to the business, legal, regulatory and institutional regimes within which the project will operate.
- It should be structured to ensure adequate levels of transparency for identifying and allocating the risks that different stakeholders are expected to shoulder.
- It should strike an effective balance between the public and private interests in a specific infrastructure project, meet established social standards and manage the long time frames and related uncertainties typically associated with developing and implementing large hydropower projects.

As yet, PPP-plus implementations are rare, but the idea is gaining momentum. In 2007 the International Bar Association established a 'PPP Task Force' to bring the relevant disciplines together to develop workable PPP models that include a strong emphasis on transparency and corporate social responsibility.

Conditions for success: sound institutional frameworks and community involvement

Investment partnerships cannot exist in an institutional vacuum. Central to all successful public infrastructure projects, including PPPs, is creating comprehensive and effectively implemented legal, regulatory, financial and institutional frameworks.

Community support is also key to reducing investment and corruption risks and making PPP plus successful. Developing 'greenfield' hydropower projects requires gaining local community support for proposed solutions to the specific environmental, economic and social issues that these projects often present, especially if they involve resettlements of communities.

As the 'rural electrification' model demonstrates so well, local community involvement is also a key element in countering the kinds of corruption and inefficiency that have plagued power industries in many developing countries. Local community control of distribution systems can dramatically reduce theft and technical losses, and remove an important obstacle for sustainable private investments to extend electricity service to previously unserved, often rural, areas. Moreover, failure to garner adequate community support to counter corruption sufficiently early can seriously delay a new project's development, undermine its revenue stream and investment sources and threaten its basic economics and potential for expansion.

Grand projects – grand corruption?

Peter Bosshard and Nicholas Hildyard¹

In nature, water always flows downstream. In the geography of power relations, clean water tends to flow to the rich and powerful, while wastewater tends to flow to the poor. An important reason for this dynamic is corruption, which has contributed to a political economy that favours large, capital-intensive projects over small-scale approaches.

In recent years, institutions such as the United Nations Development Programme and the UN Millennium Project have advocated reassessing large-scale water infrastructure projects and focusing more on decentralised projects and efficiency improvements to better meet the needs of poor people.

‘From India to Bolivia, Kenya to Nepal can be found the ruins of now-defunct water and sanitation programmes that have never yielded more than a fraction of the benefits expected,’ the Water Supply and Sanitation Collaborative Council (WSSC) warned in 2004. ‘Increasing the funds available for further large-scale, delivery-oriented infrastructure will achieve very little without a re-think of how and for whom such funds are to be spent.’²

Even the World Bank has changed its tune about gigantic hydro-projects that displace entire communities and alter landscapes forever. ‘The environmental and social consequences of these dams will continue to be contested,’ it said in 2006, ‘and it is likely that nations will construct relatively few of them.’ Instead, the World Bank sees a brighter future for small dams, because they raise fewer social and environmental concerns.³

In Pakistan, the World Bank has found that renovating watercourses may be a cheaper way to expand irrigation than new large dams.⁴ In spite of this, the country’s water bureaucracy has suffered from a ‘build-neglect-rebuild’ syndrome and prioritised new investments over maintaining existing infrastructure.⁵

Maximising opportunities for corruption is a key factor that creates a bias towards large green-field investments in the water sector.

- Large new investments award more political prestige and afford more centralised bureau-

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2 “‘Listening’ Blasts International Community’s Failure on Water and Sanitation’, WSSC press release, Geneva, 17 March 2004.

3 World Bank, ‘Reengaging in Agricultural Water Management: Challenges and Options’ (Washington, DC: World Bank, 2006).

4 World Bank, ‘Irrigation Investment in Pakistan’, Operation Evaluation Department, Précis no. 24 (Washington, DC: World Bank, 1996).

5 World Bank, ‘Pakistan’s Water Economy: Running Dry’, draft, 23 June 2005.

cratic control than decentralised schemes and efficiency improvements, in which control and resource flows are more dispersed.

- Corruption favours large-scale, capital-intensive projects because they are more likely to involve and benefit actors with deep pockets.
- Illicit payments made as part of large international projects can be funnelled into foreign bank accounts, which corrupt officials may consider safer than bribes for local projects because they tend to remain within the local economy.

In sum, corruption is an important factor that influences how vested interests capture government decisions on the type and size of infrastructure projects. The World Commission on Dams arrived at the same conclusion, and noted in its 2000 report: ‘Decision-makers may be inclined to favour large infrastructure as they provide opportunities for personal enrichment not afforded by smaller or more diffuse alternatives.’⁶

It is important to note, however, that local investment projects are by no means free of corruption. As Dipak Gyawali, a former Minister for Water Resources in Nepal, points out, ‘Corruption affects all projects, small, medium and large,’ and government-sponsored projects as well as projects implemented by non-governmental organisations.⁷ In order to maintain power, a corrupt government apparatus will tend to offer spoils to bureaucrats and power brokers at the local, regional and central levels.⁸ And local patronage systems have been found to divert money successfully from village-level infrastructure projects.⁹

The projects that offer the fewest rents to be captured by higher-level decision-makers are labour-intensive self-help initiatives. And these are precisely the types of approaches that have the largest potential to reduce poverty.

The implications are twofold: safeguards against corruption may differ with project size, but need to be built into water projects of all scales. At the same time, higher-level decision-makers can be expected to favour larger-scale projects that offer them more favourable opportunities to extract corruption rents for their own clientele. This behaviour requires additional safeguards. Transparency and public participation in the planning process for water sector projects, including the assessment of available options at an early stage, are needed to counter this corruption-driven bias towards larger projects.

6 World Commission on Dams, *Dams and Development: A New Framework for Decision-making* (London: Earthscan Publications, 2000).

7 Interview by Nicholas Hildyard, May 2007.

8 Interview with Shekhar Singh, convenor of India’s National Campaign for People’s Right to Information and a former adviser to the country’s Planning Commission, 7 June 2007.

9 Chapter 3 documents a variety of such cases. An analysis of an Indonesian village development programme found that more than a third of almost 2,000 complaints were related to misuse of funds. See S. Wong, ‘Indonesia Kecamatan Development Program: Building a Monitoring and Evaluation System for a Large-scale Community-driven Development Program’, discussion paper (Washington, DC: World Bank, 2003).