

## Grand designs: Corruption risks in major water infrastructure projects

Multi-million dollar water infrastructure projects carry some of the largest corruption risks in the sector linked to the procurement of civil works and associated design, supply and consultancy services. The potential for grand corruption in big dam projects and upgrading urban water and sanitation systems can be so significant as to skew policy making towards the most lucrative investments. “White elephants” such as overly sophisticated new wastewater treatment plants may come at the expense of maintenance of existing assets and more appropriate lower cost technologies and approaches.

### Introduction

The big ticket items in the water sector are urban water and sewerage investments (including new or upgraded supply, sewerage and drainage networks, storage reservoirs, water and wastewater treatment plants) and surface water storage and inter-basin transfers (dams, civil works and associated resettlement). Donor support for constructing large dams fell towards the end of the last century – at least partly due to concerns about social and environmental impacts (World Commission on Dams 2000). But the World Bank has more recently put major dam investments back on the agenda pledging to “re-engage with high-reward high-risk hydraulic infrastructure” (World Bank 2004). China is increasingly investing in many new major infrastructure projects in Africa, especially dams. Over half of OECD-DAC countries’ support to the water sector in 2006-07 was for large water supply and sanitation systems.<sup>1</sup> In an era where improving water governance is a key priority on the development policy agenda, infrastructure investments actually strongly dominate donor funding in water and sanitation compared to “soft” support for policies, legal systems and capacity building (World Water Assessment Programme 2009).

Large infrastructure projects are high on the agenda for a number of reasons. Urbanisation means most urban systems need to be significantly expanded, and climate change and water security issues have helped encourage new interest in water transfer schemes. Ever-growing energy demands also encourage new hydropower investments. In the case of dams, there is recognition that Africa still has to address very low levels of water storage. In industrialised countries, water storage

ensures reliable sources of water for irrigation, water supply and hydropower as well as providing a buffer for flood management. Countries in Africa, however, store only about four percent of annual renewable flows, compared with 70-90 percent in many developed countries (World Water Assessment Programme 2009).

Major infrastructure projects, due to their size alone, offer potentially the biggest rents for corrupt politicians and officials. The construction sector is ranked globally as one of the most vulnerable sectors to corruption (Transparency International 2005). Competitive tender processes – the best available norm for procuring goods and services for major projects – have their strengths but also encourage a winner-takes-all mentality where some firms risk paying bribes to gain an advantage over competitors. The complex and international nature of major projects includes potentially international sources of finance, consultants, and contractors. This means that corruption can also be trans-boundary involving countries with different laws and business cultures.

In Eastern Europe and Central Asia, construction firms have reported paying an average of seven percent of government contract values in bribes to win bids or alter contract terms (Kenny 2006). Such corruption raises not only the price of infrastructure but can also reduce the quality of and economic returns to infrastructure investment (Kenny 2007). The challenge for donors is to try and ensure that development aid strengthens governance in the sector rather than further weaken it by providing a mechanism for corrupt elites to extract rents and enrich themselves. Major infrastructure investments provide a litmus test for the quality of donor support to the water sector.

### Unpacking corruption in major infrastructure investments

#### *Types of corruption and risk areas*

Grand corruption – involving a relatively small number of individuals but involving large amounts of money and an abuse of discretionary power – is the most significant risk in major infrastructure projects.



by John Butterworth and  
Jean de la Harpe  
Senior Programme Officers  
International Water and  
Sanitation Centre  
<http://www.irc.nl>

Corruption may extend to such a high level (state capture) that national policy is influenced and, in turn, encourages decision-making that favours activities that provide most potential for corruption. Large and expensive infrastructure investments, for example, may be deliberately preferred in policy over smaller, decentralised systems and lower cost technologies.

Corrupt acts always require two parties. At this scale, corruption is likely to be between public officials and their colleagues in other departments (public-public interactions) or between public officials and private companies providing materials, equipment and services. Grand corruption generally involves politicians, senior officials and higher-level technical staff (González de Asís et al 2009). Because of its size and sensitivity, the parties involved will go to great efforts to conceal their actions. A common practice of private companies, for example, is to employ representative agents with a brief to secure contracts and provide a veneer of respectability and distance when bribery is involved.

Potential forms of corruption in major infrastructure projects include (González de Asís et al 2009):

- **Bribery:** the giving of some form of benefit to unduly influence an action or decision
- **Collusion:** an arrangement between two or more parties designed to achieve an improper purpose, such as when bidders for contracts agree among themselves on prices and “who should win.” This may involve paying bribes to public officials to “turn a blind eye”
- **Embezzlement and theft:** the taking or conversion of money, property or other valuables including, for example, the diversion of public funds to a personal bank account
- **Fraud:** the use of misleading information to induce someone to turn over money or property voluntarily, for example, by misrepresenting the amount of people in need of a particular service
- **Extortion:** involving coercive incentives such as the use of threat of violence or the exposure of damaging information in order to induce cooperation. Office holders may be either the instigators or the victims of extortion

One hotspot for these risks is procurement. In the water sector (which is mainly run as a public service) there are high levels of procurement of goods and services from the private sector. The landscape of these public-private interactions has been changing, with privatisation widely promoted over the past decade or two. This has provided new openings for corruption through contracting-out, concessions, and privatisation in a context of inadequate regulation (Hall 1999). Davis (2004), in her survey of corruption in the water sector in South Asia, reports that, for this type of corruption, “the value of kickbacks paid was fairly consistent ... between 6% and 11% of the contract value, on average.” Another related corruption hotspot is the unsatisfactory completion of projects, frequently involving collusion between supervising consultants and contractors.

In the construction of large dams, corruption in the resettlement of displaced people has also been a major problem, along with other forms of corruption in planning and construction. Marginalised re-settlers may fail to receive compensation and development benefits to which they are entitled. The largest dam building project – the Three Gorges Dam in China – gave rise to the largest such corruption scandal with officials embezzling an estimated

### Case example: Lesotho Highlands Water Project

One of the most widely known cases of grand corruption in the sector – celebrated for its David and Goliath nature of a small government ultimately holding major international companies accountable – was uncovered in the construction of the Lesotho Highlands Water Project. “Massive corruption was discovered in the LHWP in 1999, when more than 12 multinational firms and consortiums were found to have bribed the Chief Executive (CE) of the project. After the CE himself was found guilty, three major construction firms were put in the dock; thus far, three have been found guilty and charged, and one\* has been debarred at the World Bank” (Stålgren 2006). This was a prestigious project and the largest international water transfer at the time, storing and distributing water from the Lesotho Mountains to the Gauteng industrial heartland of South Africa. High volumes of water were involved: 750 million cubic meters per year. And high volumes of money: the expected income on payments for water by South Africa was sufficient to cover Lesotho’s foreign debt at the time.

Unfortunately, some major construction contracts were awarded fraudulently. The Chief Executive was prosecuted after he had appealed against his dismissal over an initial investigation based on the suspected misuse of cars and expenses (Earle and Turton 2005). It was then discovered that foreign companies had paid bribes (totaling over USD 1 million over nine years) through their agents into international accounts. The companies involved strongly resisted prosecution through name changes and takeovers to try and escape liability (Darroch 2007). Lesotho, however, mounted a successful prosecution despite its high cost and the limited support they received from financiers and the international community. In the end, the chief executive received 15 years in jail for bribery and major international companies and their agents were also convicted. The successful prosecution of both givers and takers in this case set some important precedents: 1) that jurisdiction can be taken where the impact is felt (e.g. in Lesotho), 2) that the giver and taker of bribes are equally responsible, 3) bribes are still illegal even if not acted on after corrupt agreement is reached, and 4) courts could gain access to Swiss bank accounts.

The Lesotho trial showed that multinational companies can be held to account even by a small country with limited resources. However, the limited capacity of the judicial system in many countries, the high cost of enforcing accountability through the courts, and lack of international support to such prosecutions are major concerns. Considering that the trial risks being one of a kind, pleas have been made that the case “should have been seen through an international lens with the international community taking responsibility for the part it can best play in future.” (Darroch 2007).

\*At the time of writing two firms have now been debarred.

USD 50 million from funds set-aside to resettle over a million people. In this case, compensation was handled by a decentralised agency and provided an opportunity for local governments to misuse funds. Accounting and auditing systems were subsequently strengthened with more oversight provided, but inadequate transparency and participation are still challenges and problems persist.

## Preventing corruption in major projects

### Corruption risk assessment

During the 1970s and 80s, environmental impact assessments became a mainstream tool to consider and mitigate the potential environmental impacts of projects. A key recommendation is that corruption risk assessment should also become standard practice in major water sector projects. Assessing potential corruption risks and putting preventative measures in place is easier and much more cost effective than trying to clean up corruption after it becomes established. Although universally accepted guidelines are not yet available, the necessary tools for such assessments are now available. Sector risk assessments and water integrity scans that can highlight potential corruption hotspots, but also early warning signs and preventative measures, are currently being trialled in countries like Ethiopia with World Bank support and Uganda with the Water Integrity Network. It is important that such assessments lead to strategies and action plans that build upon the risks identified. Mozambique, for example, has recently embarked on the development of a water sector anti-corruption strategy (focusing on the National Department of Water).

### Strengthening procurement systems

International competitive bidding may reduce opportunities for collusion, but can also greatly extend procurement processes and add significantly to costs (Kenny 2007). Although an important step in minimising risks and the best available tool, standard tendering and procurement procedures will not always prevent corruption and might even make things worse in some situations. Factors such as the lengthy nature, high cost, strong competition, and complicated administration of bid processes (coupled with the bonus to be paid to the bid manager) encourage a winner-takes-all mentality where unsuccessful bidders stand to lose a lot. With few ways to develop an honest competitive advantage<sup>2</sup> (since technical designs are normally proscribed) profit-driven firms may resort to bribes to win contracts (Campen 2009). Strengthening procurement systems requires ongoing support in capacity building. In high risk countries and projects, many donors insist on outsourcing procurement to international companies. This may be necessary but, in itself, is not a long-term solution to help build capacities and oversight mechanisms within government.

One approach which illustrates that preventative measures are available to prevent corruption in major projects is integrity pacts (González de Asís et al 2009). Developed by Transparency International in the 1990s to help safeguard public procurement from corruption, integrity pacts aim to reduce the chances of corrupt practices during procurement through a binding agreement between the agency and bidders

## Case example: Social witnesses in procurement, Mexico

In Mexico, the “social witness” is a representative of civil society who acts as an external observer in the procurement process.\* In order to promote transparency, diminish the risk of corruption and improve overall efficiency of procurement, this innovative practice in integrity pacts has been used for several years, following *Transparencia Mexicana*’s recommendation. The social witness – a highly honourable, recognized and trusted public figure who is independent from the parties involved in the process – makes recommendations during and after the procurement process, and provides public testimony. Regulations specify criteria for participation of the social witnesses in procurement, and a list of registered social witnesses is published on the website of the Ministry of Public Administration (See [www.funcionpublica.gob.mx/unaopspf/unaop1.htm](http://www.funcionpublica.gob.mx/unaopspf/unaop1.htm)). *Transparencia Mexicana*, for example, acted as the social witness for the procurement of sewerage treatment services by the Municipality of Saltillo in 2004, a contract worth almost USD 5 million. They followed each stage of the procurement process, attended meetings and provided advice to the municipality. They produced a signed summary statement on completion of the procurement testifying that the process was proper and explaining what happened at different stages (for example, why certain bidders failed). It was also explained why the contract was awarded to the successful bidder.

(Source: OECD [2006])

for specific contracts. They are intended to reduce the high costs of corruption in public procurement. The pact is made between a procurement agency (usually governmental) and bidders for specific contracts. It enables companies to abstain from bribing, by assuring them that their competitors will also refrain from paying bribes. Public agencies also pledge to undertake to prevent corruption, including not seeking to bribe. Integrity pacts have already been implemented in several countries (including Argentina, Colombia and Mexico) in infrastructure projects in the water and sanitation sector. Scaling-up such approaches remains a challenge, however, and requires the support of donors, governments, the private sector and facilitators such as NGOs and professional associations. In countries where the enabling environment is not yet conducive for such pacts at the national level, piloting such approaches sub-nationally (where there is commitment from a city or district government) could be a way forward and may set a positive example.

## Opportunities for donors

Donors can strengthen their own systems of accountability by improving access to documents, taking action against corrupt staff and blacklisting corrupt project partners (O’Leary and Stalgren 2008). They also need to provide positive encouragement and support to their own staff to work against corruption. Finding out about corruption and acting on this information can cause problems. Civil servants risk not being promoted if they uncover corruption in their programmes and as a result many would prefer to keep quiet.

Donors are also in a position to strengthen the anti-corruption components of water programmes, promote civil society capacity and media development (important in encouraging recipient governments to be accountable to citizens as well as donors) and to put pressure on governments to implement anti-corruption plans and strategies within the sector. Positive roles that donor countries can play in major projects include encouraging corruption prevention at the design stage, addressing corruption risks in implementation itself (especially contracting and re-negotiations) and post-corruption follow-up including support to prosecutions (a key lesson from the Lesotho highlands experience).

## Some conclusions and recommendations

- Major water infrastructure projects offer the biggest opportunities for corruption and should therefore always be subject to corruption risk assessment. Such assessments ought to be mainstreamed with standard guidelines being adopted as for environmental impact assessments.
- Where dams and other projects have major social impacts such as the displacement of communities, transparent procedures for early engagement in planning and dealing with community complaints (including the role of an ombudsman) are important, as are good communication strategies. Communities should be made partners in such developments.
- Donors and other actors with influence need to look out for the effects of corruption, or potential corruption, on policy and decision making. Specifically, close consideration should be given as to why large-scale investments are prioritised over other alternatives which may offer better value for money and more sustained access to water and sanitation.
- Procurement processes in the sector could be strengthened and made more effective through greater levels of research and improved documentation and capacity building in this area. Piloting and scaling-up of promising approaches such as integrity pacts and social witnesses should also be a priority. ■

## Further resources

The Water Integrity Network ([www.waterintegritynetwork.net](http://www.waterintegritynetwork.net)) was formed to support anti-corruption activities in the water sector worldwide.

Sohail, M and Cavill, S (2007) "Accountability arrangements to combat corruption – case study synthesis report and case study survey reports" in *Partnering to combat corruption series*. Available at: [www.lboro.ac.uk/wedc/publications/](http://www.lboro.ac.uk/wedc/publications/)

Halpern, J, Kenny, C, Dickson, E, Erhardt, D and Oliver, C (2008) "Deterring Corruption and Improving Governance in the Water Supply & Sanitation Sector: A Sourcebook." *Water Supply and Sanitation Working Note 18*. Washington DC.: World Bank Available at [www.worldbank.org/water](http://www.worldbank.org/water)

The GIACC Resource Centre ([www.giacentre.org](http://www.giacentre.org)) includes a Project Anti-Corruption System (PACS) designed to assist in the prevention and detection of corruption on construction projects.

Transparency International (2009) *Business Principles for Countering*

*Bribery*. Available at [www.transparency.org/global\\_priorities/private\\_sector/business\\_principles](http://www.transparency.org/global_priorities/private_sector/business_principles)

The Construction Sector Transparency Initiative (CoST) is an international multi-stakeholder initiative designed to increase transparency and accountability in the construction sector. See [www.constructiontransparency.org](http://www.constructiontransparency.org)

## References

- Campan, R (2009) Unpublished presentation to the International Working Group of Koninklijk Nederlands Waternetwerk, Deventer, 12 February 2009
- Darroch, F (2007) "Lesotho Highlands Water Project: corporate pressure on the prosecution and judiciary" in *Global Corruption Report 2007*, Berlin: Transparency International. Available at: [www.transparency.org/publications/gcr](http://www.transparency.org/publications/gcr)
- Davis, J (2004) "Corruption in public service delivery: experience from South Asia's water and sanitation sector" in *World Development* 32(1), pp 53-71
- Earle, A and Turton, A (2005) "No Duck No Dinner: How Sole Sourcing triggered Lesotho's Struggle against Corruption" in *African Water Issues Research Unit (AWIRU) paper*, Pretoria: University of Pretoria, CiPS. Available at: [www.acwr.co.za/pdf\\_files/07.pdf](http://www.acwr.co.za/pdf_files/07.pdf)
- González de Asís, M, O'Leary, D, Ljung, P and Butterworth, J (2009) *Improving transparency, accountability, and integrity in water supply and sanitation: action, learning, experiences*, Washington DC.: World Bank
- Hall, D (1999) "Privatisation, multinationals, and corruption" in *Development in Practice* 9(5), pp 539-556
- Kenny, C (2006) "Construction, Corruption, and Developing Countries" in *World Bank Policy Research Working Paper No. 4271*, Washington DC.: World Bank
- Kenny, C (2007) "Infrastructure Governance and Corruption: Where Next?" in *World Bank Policy Research Working Paper 4331*, Washington DC.: World Bank
- OECD (2006) *Mapping out good practices for promoting integrity in public procurement*. Available at: [www1.fidic.org/resources/integrity/oecd\\_integ\\_procurement\\_24nov06.doc](http://www1.fidic.org/resources/integrity/oecd_integ_procurement_24nov06.doc)
- O'Leary, D and Stalgren, P (2008) "Fighting corruption in water: strategies, tools and ways forward" in Zinnbauer, D and Dobson, R (eds) *Global Corruption Report 2008: Corruption in the water sector*, Berlin: Transparency International. Available at: [www.transparency.org/publications/gcr](http://www.transparency.org/publications/gcr)
- Stålgren, P (2006) "Corruption in the Water Sector: Causes, Consequences and Potential Reform" *Swedish Water House Policy Brief Nr. 4*. Stockholm: SIWI
- Transparency International (2005) *Global Corruption Report 2005: Corruption in construction and post-conflict reconstruction*. Available at: [www.transparency.org/publications/gcr](http://www.transparency.org/publications/gcr)
- World Commission on Dams (2000) *Dams and development: a new framework for decision-making*, London: Earthscan
- World Bank (2004) *Water Resources Sector Strategy: strategic directions for World Bank engagement*, Washington DC.: World Bank
- World Water Assessment Programme (2009) *The United Nations World Water Development Report 3: Water in a Changing World*, Paris: UNESCO and London: Earthscan

## Endnotes

<sup>1</sup> Member countries of the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee.

<sup>2</sup> One way for companies to differentiate themselves from their competitors is to adopt and enforce an anti-bribery policy.

---

This U4 Brief is the second in a three part series on corruption risks and the water sector. Two further U4 Briefs address corruption risks in major water infrastructure projects and in institutional reform in the water sector. Download all U4 Briefs at [www.u4.no](http://www.u4.no)