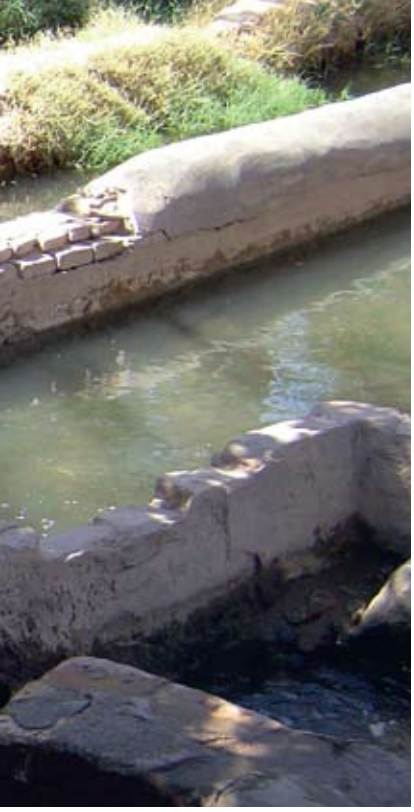

Corruption Risks in Water Licensing

With case studies from Chile and Kazakhstan

WIN Water Integrity Network
Fighting corruption in water worldwide

UNDP WATER GOVERNANCE FACILITY SIWI

SWEDISH WATER HOUSE

REPORT 27

ISBN: 978-91-975872-7-3
ISSN: 1404-2134

Design and production by Britt-Louise Andersson, Stockholm International Water Institute, SIWI. Printed by Wikströms, Uppsala, Sweden. The printing process has been certified according to the Nordic Swan label for environmental quality. For electronic versions of this and other SWH publications, visit www.swedishwaterhouse.se.

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Note to the Reader:

Water resource licensing is increasingly becoming a cornerstone for integrated water resources management (IWRM). Licensing and other allocation mechanisms are important because they underpin who gets access to water and provide a means to manage water fairly, efficiently and sustainably. Water licensing is often in the hands of young institutions operating under new laws and sometimes organised along water basin rather than traditional administrative boundaries.

With growing water scarcity in an increasing number of countries, there is a significantly greater risk of corruption in the water licensing process. This risk, and its underlying factors, are not well understood. This report explores the nature of the risk using a 2007 field study of Chile and Kazakhstan as case studies for risk mitigation. The report was developed by the authors indicated below and thereafter revised by Jan Teun Visscher.

This study was supported by the Water Integrity Network (WIN) www.waterintegritynetwork.net, the Swedish Water House (SWH) www.swedishwaterhouse.se and UNDP Water Governance Facility at SIWI (WGF) www.watergovernance.org. The authors are solely responsible for the contents of the report, and the views expressed are not necessarily shared by SWH, WIN or WGF. The authors would like to thank the individual officials, water managers, and others who were interviewed in Kazakhstan and Chile. In addition, valuable comments were made by members of WIN and Transparency International including: Donal O'Leary, Kathy Shordt, Håkan Tropp, Larry Haas, Teun Bastemeijer and Miguel Angel Penailillo. Karin Lexén at SWH provided help and assistance along the publishing process.

In 2007 Jeroen Warner, Kai Wegerich, Christian Gouet, and Alejandra Mora Vallejo were all attached to Wageningen University and Research Centre in the Netherlands. Grit Martinez is now working with the Water Integrity Network and the Ecologic Institute in Berlin, Germany. John Butterworth and Jan Teun Visscher are both attached to the IRC International Water and Sanitation Centre, The Hague, the Netherlands, John as staff member and Jan Teun as associate. Comments and suggestions should be addressed to IRC (butterworth@irc.nl).

Photo: Mats Lannerstad

Table of Contents

How to Cite

Warner, J., Butterworth, J., Wegerich, K., Mora Vallejo, A., Martinez, G., & Gouet, C. and Visscher, J.T. 2009. Corruption Risks in Water Licensing with Case Studies from Chile and Kazakhstan. Swedish Water House Report 27. SIWI, 2009.

Photo: Mats Lannerstad

Introduction

Many industrialised and non-industrialised countries are in the process of reforming their water resources management (WRM) frameworks. This includes establishing new institutions, sometimes at new scales (at catchment level rather than at administrative units of districts or regions) with significant decision-making and revenue collection powers. Water licensing is a very important mechanism for these institutions to determine who has access to water and how much they pay to use or pollute it. Water resource licenses, permits or permissions may cover a range of purposes including: regulation of abstraction of surface or groundwater, utilising or changing the course of water through damming or draining, and discharging pollutants into receiving waters. Increasingly, state regulated water licensing replaces other more traditional arrangements where the authority to allocate water was often vested in local traditional bodies. Some licensing arrangements make use of market mechanisms to allocate licences using the argument that this makes water management more transparent, accountable, efficient, equitable and sustainable.

A water licence grants the right to abstract, use or pollute a certain amount of water during a certain time period, subject to certain conditions, and often against a certain fee (Box 1). It may grant the use of a fixed amount (m^3 per day) or a proportional (time) share of a water flow.

Licensing is part of a system to allocate and regulate water resources use. This system includes: the technical management, metering and monitoring of water abstraction and environmental indicators; enforcement mechanisms including punitive actions in case of violations, non-performance or abuse; and mechanisms for complaints.

A licence implies rights and responsibilities for users and the issuing authority. It presupposes effective water control down to the level of the licence holder. If the licence is for a fixed amount (m^3 per day), this amount needs to be available as well as the technical ability to measure abstraction. If the licence is in proportional (time) shares, the infrastructure must allow for regulation of the water division (water dividers).

Water licensing is vulnerable to corruption and can be manipulated by the public officials responsible for licensing and those applying for a license. There is however a lack of systematic enquiries on the extent of corruption in water resources management (Lewis and Lenton, 2008) and water licensing processes, or the effectiveness of measures taken to

Box 1: What is a water licence?

A water licence provides an authority with a right to use or pollute surface water or groundwater. Use may be consumptive (where water is not returned to the source e.g. irrigation) or non-consumptive (hydropower, cooling). A licence normally identifies the water source, the location of abstraction, the amount of water to be impounded, diverted or abstracted, the priority of the "water right" established by the licence, and conditions under which the diversion and use must take place including limits on use, time limits and other restrictions such as drought conditions.

Table 1. Risk areas for potential corruption in water licensing	
Risk area	**Explanation of risk**
Licence application process	Potential to influence the awarding process
The content of the licence	Possibility to influence amount of water, timing, kind and amount of pollutant, safety margins, etc.
Bidding and trading procedures	Opportunities to influence the bidding mechanism and to corner the market
Enforcement of licence	Possibilities to avoid consequences of infringements (poor control measurement, paying bribes, etc.)

Box 2: Key characteristics of case study countries		
Indicator	**Kazakhstan**	**Chile**
Total population	15 million	16 million
GDP 2007 (Purchasing power parity)	USD 10,829	USD 13,885
TI Corruption Perception Index (2008)	2.2 (ranking 145)	6.9 (ranking 23)
Average annual precipitation	250 mm/year	1 522 mm/year
Total actual renewable water resources	7 086 m^3/cap/yr	93 690 m^3/cap/yr
Total water withdrawal	2 263 m^3 per capita	803 m^3 per capita
Agricultural water use (% withdrawal)	81.7%	63.5%
Domestic water use (%)	1.7%	11.3%
Industrial water use (%)	16.5%	25.2%
Total access to improved water supply	86%	95%
Total access to improved sanitation	72%	91%

Sources: FAO (2007) and WHO/ UNICEF (2006)

prevent corruption through measures such as fair procedures, accountability of officials, and publishing of licence registers. Even so, we can identify the main areas for potential corruption risks in water licensing (Table 1).

This study contributes to learning more about these issues by exploring the situation in two countries. One is Kazakhstan with a state-dominated water sector in the midst of economic and institutional reform, including turning former farm co-operatives into individual farm enterprises. The other is Chile which started to liberalise the water sector in 1981 and is seen by many as the model for market-based initiatives (Dourojeanni and Jouravlev, 1999).

In both countries, water licensing is situated in a dynamic legal-administrative context and environmental reforms have recently been introduced. The paper reviews these aspects and concludes with recommendations and suggestions for future preventive measures that can be applied to strengthen transparency, integrity and accountability in water resources licensing. Key characteristics of the case study countries are seen in Box 2.

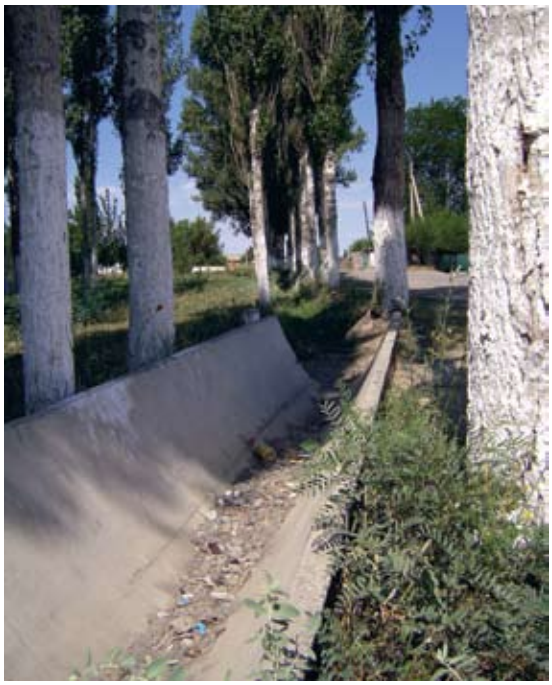

Photo: Kai Wegerich

Photo: Manfred Matz

Case Study Methodology

This report is based on a rapid survey carried out between 22 July and 15 August 2007 by two teams in Chile and in the Talas river basin in Kazakhstan. In total, 80 semi-structured and open interviews were held with licensors issuing water licences, water licensees, and other informants including NGOs, private sector managers, and the press to explore corruption risks in water licensing. The initial interviews were held with 'gatekeepers' working in the sector known to the local researchers. From these first interviews other names were derived for subsequent interviews. In addition some field observations were possible by joining monitoring field visits which together with some literature review allowed for triangulation of information. Because the topic is sensitive, some information was provided under guarantee of anonymity. Where feasible this information was checked and included if validated by other respondents. The lead researcher was an 'outsider' with knowledge on the topic, working together with local researchers and water experts.

Reflection on study method

The rapid assessment approach allowed reaching well informed key actors in Chile and Kazakhstan. A lot of insight could be gained in a short time because the water sector is relatively small in both countries. However, a more comprehensive study is needed to understand all sub-sectors in detail. This may be more easily achieved in countries with strong anti-corruption NGOs such as Transparency International chapters and multi-disciplinary university research groups interested in the topic.

In Chile which has a tradition of anti-corruption research, it proved very feasible to talk openly about it with NGOs, indigenous right lawyers and civil society leaders, whereas in the interviews with official institutions or companies, it seemed less advisable to use the word corruption openly. In Kazakhstan, the NGO sector is less developed and there is no significant tradition of corruption research or anti-corruption activism linked to water. In this country the team was accompanied by government staff during the interviews which, because of the sensitivity of the subject, may have restrained some of the informants in voicing their opinions. Also transport was a problem because of the large distance to research sites.

It proved important to plan interviews well in advance due to busy schedules of the actors involved. The combination of external and local researchers worked very well. The local researchers had a good understanding of the local setting and history, good contacts, and longstanding relationships which fostered trust during the interviews. Having an external researcher also proved important as it sometimes helped to get appointments. Sometimes it proved easier for informants to talk to a "stranger." Another important aspect is that the relative risk for an external researcher is smaller. A local researcher may lose job opportunities by researching and publishing on corruption and may face the threat of lawsuits and physical violence. A combined team of local and foreign researchers is therefore also recommended for future research.

Case study 1: Kazakhstan

Kazakhstan is a large, ethnically and culturally diverse country situated in Central Asia with a low population density of 5.4 persons per km^2. It is not a water scarce country even though a large part of the country is semi-arid. It declared itself independent in 1991 after having been a Soviet republic since the 19th century. Economically it thrives as an important oil exporter with recent annual growth rates of some 10 percent. It has developed its industry with oil revenues, but agriculture remains important with a 'water share' of 82 percent.

The country is facing important Water Resource Management (WRM) problems which include inefficient water use in agriculture, inadequate wastewater treatment, and negative effects of the Soviet legacy of massive water diversion from the rivers Syr and Amu Darya for cotton irrigation resulting in the shrinking of Lake Aral. WRM in Kazakhstan is best described as being fragmented, underfunded and poorly governed. A decade of budget and staffing cuts has had a dramatic effect on the authorities' ability to manage water (Hannan, 2008). However, with support from, UNDP, the Global Water Partnership, and others, Kazakhstan has made some significant improvement including the passing of a new Water Code in 2003 aiming to *'achieve and maintain environmentally friendly and economically optimal levels of use and protection of water for conservation and improvement of living conditions for population and environment'*.

The code prioritises drinking water supply and designates the Water Resources Committee, under the ministry of agriculture, to issue all approvals related to surface and groundwaters. It also establishes the principles of river basin councils (RBC), which are advisory bodies of governmental organisations, water user associations (WUA), and NGOs set up to jointly resolve issues and implement basin agreements. RBCs have now been established in all eight river basins and an IWRM plan was adopted in December 2008 by the government.

Still a lot needs to be done, however, to create meaningful change, particularly in agriculture where former state and collective farms have disintegrated and smaller private farm enterprises have been established. Allan and Steyl (2006) indicate for example that WUAs lack both financial and human resources and that NGOs are under-represented in the still toothless RBCs. On the positive side, the number of WUAs is expected to go up from 80 to 500 under the European Union funded Tacis programme, while the Organization for Security and Co-operation in Europe (OSCE) supports WUAs in obtaining rights and aims to create a transboundary basin council for the Chu and Talas Rivers. It is hoped that these efforts will increase access to information, and public engagement in the decision-making process.

Water allocation and licensing

According to the code all water resources are owned by the state, which decides about its use and disposal. Groundwater abstraction however is basically still unregulated (Allan and Steijl, 2006). The code distinguishes between general and specific uses of surface water. General use is a public right and is defined as using the water without applying technical means that have an impact on water conditions. Special use is defined as requiring facilities or technical

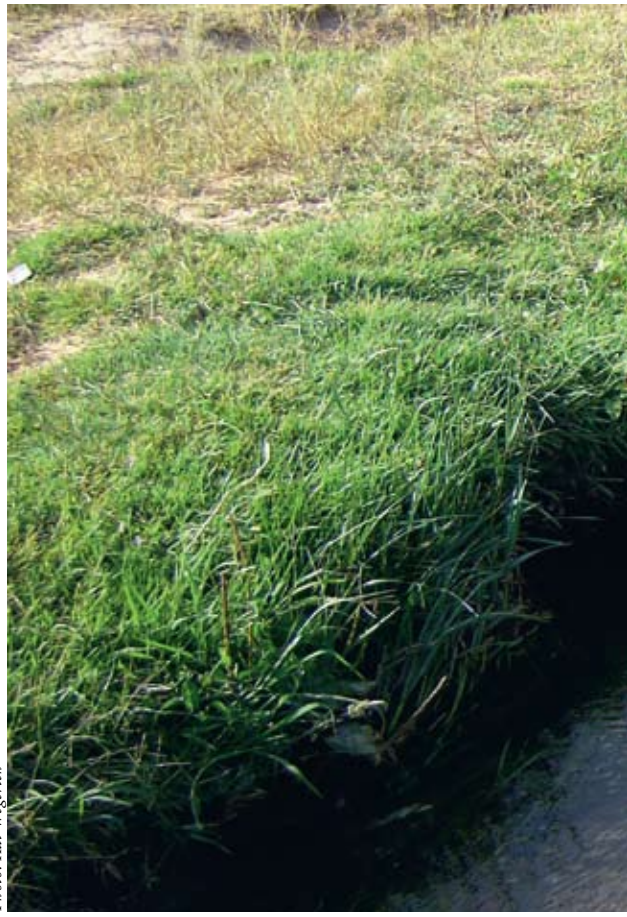

Photo: Kai Wegerich

devices and needs a licence or a permit. This includes use of water for agriculture, industry, electricity production, fish breeding and transport. Licensing is required for:

- Withdrawal and use of surface water for agricultural, industrial, power engineering, fishing or transport needs in excess of 50 m^3/sec (which over time will be extended to smaller volumes); and
- Withdrawal and supply of surface water for secondary water users.

Licences for irrigation are given by the Commission of Water Resources (CWR) of the Ministry of Agriculture (MoA) to irrigation departments that in turn give out allocations to the newly formed WUAs and canal organisations. These ultimately give farmers time allocations to water on the basis of this licence. Individual 'permits' are expected to be introduced in the near future. WUAs pay 10,000 tenge (USD 78) for the right to take irrigation water from the canal, and 100,000 tenge (USD 780) to take it from the river. Informers indicate that this is not considered expensive by these organisations or the farmers, but getting the permission is the challenge. Once a license is issued, WUAs also have to pay for the water itself (the service). Water pricing was introduced in agriculture in 1997 to raise money to maintain and repair the deteriorating water delivery infrastructure. If the licensor judges that a farmer or WUA is not paying enough, they can cut them off for a few days as a warning. For the water users this can create severe problems and there is no mechanism in place for compensation, or redress.

While farmers get allocated water as an individual quota, the infrastructure remains collective. There are still no meters or locks on gates. While during the time of the kolkhoz (the collective farm) there was always only one production unit and one crop, today, private farmers grow a variety of crops with different water requirements which are difficult to coordinate with the current infrastructure. In practice the means are mostly not in place to measure water deliveries to individual farmers

accurately, and at best the charges are levied with reference to the duration of supply (Krutov & Spoor, 2006). Tail-end farmers or even whole WUAs are often at the mercy of upstream water users (head-enders) (Wegerich, 2008a).

According to several informants and field observations, there is a lack of logistics and infrastructure to seriously monitor water use, and water controllers are paid poorly. Inspectors do visit farms to measure and, if they observe irregularities, they can use their discretionary power to close gates (which then will be reopened upon payment). Under the rules, inspectors are supposed to measure water use in the whole area once or twice a day and get the signature of the WUA or farmer that a certain amount was delivered. This, however, may not provide reliable information on the daily water consumption. Moreover, the inspector may not be able to make it to the farm twice a day. In the study area (Talas), the inspectorate was chronically underfunded. It had only two cars to facilitate inspection, so inspectors have to go by bike, on horseback or walk. This situation needs considerable improvement to be able to provide reliable monitoring results and to ensure proper application of the terms of the licences. An other important problem is that the water availability is based on a transboundary agreement with Kyrgyzstan which has all the reservoirs on its side of the border, thus requiring clear transboundary cooperation (Wegerich, 2008b).

A precondition for a well-functioning water licensing system is dissemination of information (how to get a water right, rules and conditions, and sanctions, etc.) so that stakeholders know how the system works. For example, in Kazakhstan starting the application process is enough to claim a water right, you don't have to wait for the permission to come through. But if you don't claim the right, or don't complete the necessary paperwork, you have no rights and others can claim your water. Our interviews showed that not all farmers are yet aware of this.

In water pollution licensing the situation is worse. Kazakhstan does not have extensive water quality legislation that is effectively enforceable. Attributing pollution to its source and identifying violations of permission to pollute are also problematic. If you measure water quality at the end of a channel that is polluted by 10 or 15 industrial companies, it is impossible to work out who polluted how much.

Photo: Getty Images

Photo: Annika Björje, SIWI

Case study 2: Chile

Chile, with a population density of 22 persons per km^2, has a length of 4,300 km and on average is 175 km wide. It has a hugely varied climate ranging from the world's driest desert in the north, through a Mediterranean climate in the centre, to a snow-prone Alpine climate in the south. Its economy is predominantly based on a range of primary resources, fishing, agriculture and industry. Hydro-electricity, cellulose production, mining and agriculture all require large amounts of water. Agriculture counts for 63.5 percent of water withdrawal and is mainly concentrated in large haciendas (farms) in the Central Valley. In the dry north, agriculture is more scattered and highly dependent on irrigation.

The current Law of the Environment approved in 1994 contains many modern provisions, such as Environmental Impact Assessments (EIAs). In practice, however, the law is not fully applied and it favours economic criteria over technical criteria in decisions. Stakeholder and citizen participation in the process is hindered by insufficient technical assistance and support from the administration, caused by a lack of resources or excessive work load of its employees. Control of water projects is another problem, which, in principle, is in the hands of the administrative services related to the area of the project. In general, however, the administrative services staff do not have sufficient capacities to fulfil their duties. The position of the Government in the process is somewhat ambiguous. Environmental legislation is promoted but, at the same time, companies owned by the State have been involved in water contamination. Another problem is that IWRM is especially challenging because surface and groundwaters are legally two different and completely independent entities. Furthermore, more than 30 state organisms have undefined competences in WRM (Amezaga et al. 2008).

Water allocation and licensing

Chile's Civil Code of 1857 (inherited from Spanish law) indicated that all waters within natural banks are national goods for public use. Access was granted by a competent authority that could revoke the grant if the terms of use were not respected. The central authority decided about the water rights but had little understanding of the situation with the result that some users received large quantities whereas others received too little. The Water Code of 1981 changed the situation and introduced market mechanisms to regulate water use. Water remains a public resource but the rights to use and develop it are private. This concept transforms water into an economic resource, regardless of its environmental or social value. The law establishes well defined property rights which are irrevocable and not connected to land ownership and gives legal security to investors. If water is available, Chile's general water directorate (DGA) cannot refuse water grants, unless rights of earlier applicants are prejudiced. Initially the rights were free, but in several locations prices

have gone up as a result of the water right being granted to the highest bidder when multiple interested parties exist.

Many see the water rights market in Chile as exemplary. De la Luz Domper (2009) for example indicates that it encourages owners to manage and improve the quality of the water resource. It "guarantees that water is adequately priced, that supply and demand are linked to each other, and that ultimately, water resources are allocated between and by different users – not by a distant, misinformed administrative authority". She argues that the governance structure was developed to take historical property rights into account, and to encourage existing owners of water rights (especially small farmers) to register their right.

However, others including, for example, Yanez and Orellana, (2007), Unesco (2006), and Bruns et al. (2005) and several of the informants mention a number of important problems. They indicate that the vertical legislation is managed by government staff without involvement of civil society or social control. It neglects customary and indigenous forms of water management and contributes to the disintegration of collective indigenous systems. The decision-making right is now attached to the economic buying power of individuals. Large companies (involved in mining, hydroelectric power generation, paper production etc.) have claimed an overwhelming percentage of water rights. The law has resulted in monopolies and speculation. The elite who owns the water rights have effectively been able to deny the interest of the large group of poorer users. Dinar et al. (1997) indicate that market transfer of water rights does produce substantial gains from trade (of what used to be a free asset). Eventually these additional costs are charged to end users, including the general population in Chile. Potentially 'available' resources have been oversold (i.e. more than 100 percent of available water allocated for consumptive use) (Alvarez, 2007). Prices

Photo: Ivan Vicencio/SXC

of water use rights have also greatly increased, since in many areas there are no more water use rights available except through competing in the water market. Prices in a water auction (allowing indefinite use) can be as high as 8 million pesos/litre/sec (USD 18,000) (El Mercurio, 2007).

Informers also suggest that some Chilean farmers don't even know they have lost their water rights and only now find that the old law (before 1981) is no longer valid. If all available rights have not yet been allocated they may be able to apply for a license, but this requires considerable paperwork and the services of a lawyer, which is unaffordable for many poorer water users. If a farmer or an indigenous community belatedly finds out that they missed out on an allocation, they can only resort to the water market, and that is if somebody wants to sell.

Chile amended the law in 2005 seeking to better protect the environment and indigenous people. The reform also sought to counter speculative use of the market such as the hoarding of water rights by the big companies, and to free up water rights for those who could not access them or did not know that they had to apply for rights earlier. A provison has been added that requires the licensee to prove that they have the capacity to use the amount of water they claimed. If they fail to use allocated water for five years, they forfeit their water right. If thereafter more parties are interested in securing these forfeited water rights they have to go through an auction. This, however, is still an advantage for the large companies as they can out-bid small farmers and indigenous people, and it seems indeed that rights freed up by the reform were later snapped up by other big companies.

The reform did manage to improve the collection and dissemination of information on water rights. It used to be very hard to get access to information that was all stored in the capital and not available in digital form. This has changed and information is now available to everybody in digital form, but has to be requested in writing and paid for.

Pollution control licensing

Chile has regulation on the emission of certain pollutants into waters but according to several informers the list is not sufficiently comprehensive. The general approach is that companies have to treat and monitor their own wastewater and this is occasionally checked by the government. A good point is that the law requires Environmental Impact Assessments (EIA) but only for companies that discharge on larger rivers with a flow over 10 m^3/s and not necessarily looking at impact under minimum flow conditions. Fortunately political interest is increasing to develop this issue further as part of a new river basin management policy.

The law in Chile is generally enforced with warnings, deadlines, and if changes are not properly made, the business receives a fine or can even be closed for a period. But when the cost of the fine is lower than the gain made by evading the law, this does little to discourage companies from polluting. Companies interviewed argued that more environmentally sound mining will be prohibitively expensive. Sometimes, however, agencies do show their teeth. In Pelambres a mining company was convicted in 2007 for illegally appropriating water rights (La Nacion, 2006). A paper mill was fined for polluting the Mataquito River which affected the livelihoods of local fishermen. The plant had been emitting polluted wastewater without licence since 1992.

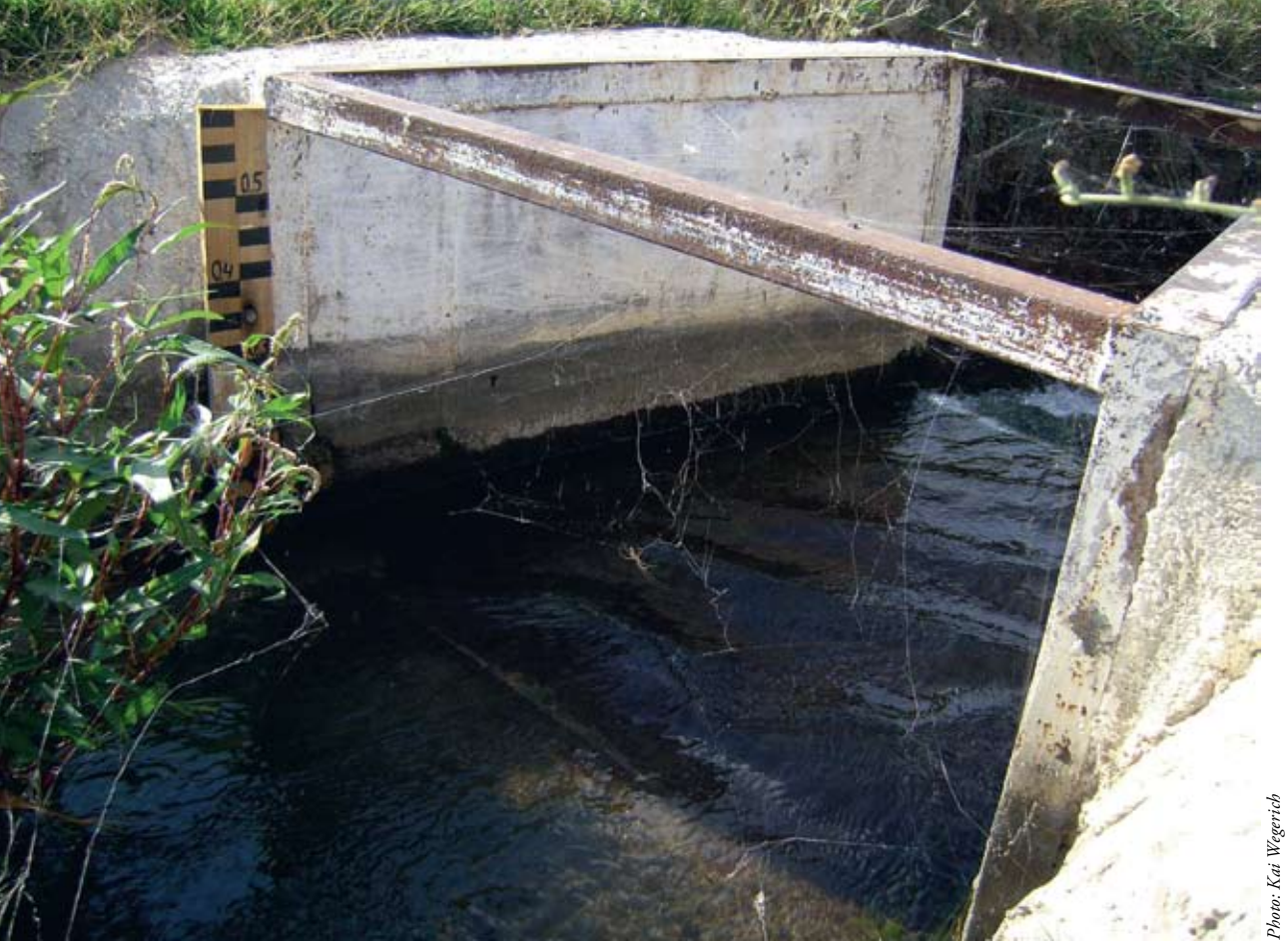

Photo: Kai Wegerich

Corruption Risks in Water Licensing

Table 2 summarises potential risks involved in water licensing in Chile and Kazakhstan. Whether corruption actually occurs will depend according to Klitgaard (1998) on whether the size of the corrupt gain is greater than the penalty if caught, times the probability of being caught. He indicates that corruption is a function of the degree of monopoly of someone over a service or activity, their discretion in deciding who should get how much, and the degree to which their activities are accountable. Corruption = Monopoly + Discretion – Transparency. These issues are explored in Table 3.

Table 2 and 3 show that there is a potential corruption risk in water licensing in both countries. In Kazakhstan this relates to both the application process where there is a risk of speed money being used to facilitate the comprehensive paper work and licence enforcement where low paid local controllers may be encouraged to turn a blind eye. The situation may be further aggravated because it is anticipated that in the future, every farmer – instead of every WUA – will have to obtain a water permit for volumetric water amounts.

In Chile the potential risk seems to relate more to the "traffic of influence" (grand corruption). A strong interconnection exists between the public and private sector. The latter among others are funding political campaigns (according to different informants sometimes even taking stakes in different parties at the same time) and involve politicians and government officials in their boards. In 2003 political campaign funding was regulated but still requires further strengthening. Part of the underlying interest may be that politicians have enormous discretion over appointments. Cases are reported in which, for example, electricity company managers have made the transition to regulatory agencies and vice versa (de Solar, 2008).

The informants also mentioned cases where people lost their job after speaking out about irregularities. Licence enforcement seems to entail a lower risk although in wastewater disposal this may be an issue.

Table 2. Potential risks in water licensing in Chile and Kazakhstan		
Risk area	**Kazakhstan**	**Chile**
Licence application process	The complicated licence application process requires a large number of documents. This incurs a high cost for applicants in terms of time and resources possibly including speed money.	Licence application is a matter of being informed (first come first served). When an Environmental Impact Assessment is needed these are often done by university staff who may depend on the same industry for other work.
The content of the licence	The licence is only needed for abstraction of large volumes (> 50 m^3/sec) and for redistribution to others. Civil society is not yet active trying to enhance control.	Civil society reports that licence content can be influenced. In some areas water is 'sold' in access of availability. Pollution licences for state owned companies are less strict than for private sector.
Bidding and trading procedures	Allocation is done by the state agency and no trading takes place. In practice head enders however can control the water flow and deprive tail enders from water without compensation. Perhaps as a result cases of damaged and stolen control gates are found.	Trading is free, giving an advantage to large companies to buy the water rights. Temporarily trading among farmers occurs and is seen as an advantage as it does not involve large bureaucracy. Opportunities for civil society to influence the process are very limited.
Enforcement of licence	Insufficient resources are available for enforcement. Controllers can suspend the licence for a few days as a warning with potential damage to crops. Controllers receive low payment which may open up possibilities for bribes. Limited social pressure exists to enforce licences.	Control agencies are under resourced and still not sufficiently developed, but cases of law enforcement do exist. Civil society organisations and the media play active roles in trying to avoid environmental damage and they support indigenous population groups to claim water rights.

Based on results from interviews and literature referenced in this document.

Photo: Joost Buenop, Shortlisted Photo, Water Integrity Visualized Photo Contest (WIN)

Table 3. Assessing corruption potential in water licensing		
	Kazakhstan	**Chile**
Monopoly	Licences are issued by the Water Resource Commission of the Ministry of Agriculture. This is only needed for abstraction of large volumes (> 50 m^3/sec) and for redistribution to others. In future also smaller uses will require a licence. Applying for the licence involves direct dealing with public officials who can influence the speed of the application process, according to several informers.	Large mining and electricity companies hold most of the water rights. The (now Spanish owned; Kol, 2003) hydro electricity company ENDESA holds 81 percent of the non-consumptive water use rights at national level and even more worrying is that over 100 percent of water resources are sold for consumptive use in some regions (Alvarez, 2007). The 2005 amendment of the law tried to remedy this as licensees have to prove that they have the capacity to use the water. This resulted in several licences being freed up, but informers indicated that most of these rights were subsequently snapped up by other powerful buyers.
Discretion	The institutional setting is complex with regulating and managing agencies generally lacking authority and staff. This implies a lack of adequate monitoring and control. Local controllers have the power to close of the water if a licensee is not meeting the requirements. A formal complaint mechanism does not exist. Wastewater monitoring is weak and thus allows for misreporting and malpractice.	The institutional framework for IWRM is complex. Organisations seem to be understaffed and unable to conduct adequate monitoring and control. Politicians have an enormous say in staff nominations. A strong link exists between politicians, civil servants and private sector. The latter finances political campaigns and nominates politicians in their boards. Also, leaders in the sector sometime rotate between the private and public sector. Actual opportunities for civil society to really influence or participate in the decision-making process are still very weakly established under the present legislation. On the positive side, complaint mechanisms do exist as well as cases of law enforcement and prosecution.
Transparency	Water policy promotes access to information, yet the hydrometeorological service has deteriorated, leading to a lack of reliable information on river flows, aggravated by lack of information concerning transboundary water. Corruption is an issue as Kangur et al. (2005) report farmer complaints about corruption in the water bureaucracy within the Talas basin. NGOs are limited in number, do not yet work much on water and seem to depend very much on Western donors. There are, however, some promising processes to strengthen civil society participation in newly established River Basin Organizations and River Basin Councils (RBCs) that may promote accountability.	Water policy promotes access to information but water rights registries are not easily accessible. The director of DGA confirms that information is often inaccurate and incomplete but they are willing to improve. According to Chile Transparente (Local Transparency International Chapter), DGA publishes proceedings of critical workshops. In the region of Aysen, DGA in collaboration with others including civil society, are running information campaigns and education on the functioning of the Water Code and water resource protection. NGOs play a very active role in trying to enhance transparency and protect the environment, which is not always appreciated by those with vested interests. Sometimes they face very serious threats. The same is the case for investigative journalists who despite the media openness may face law suites or even death threats.

Based on results from interviews and literature referenced in this document

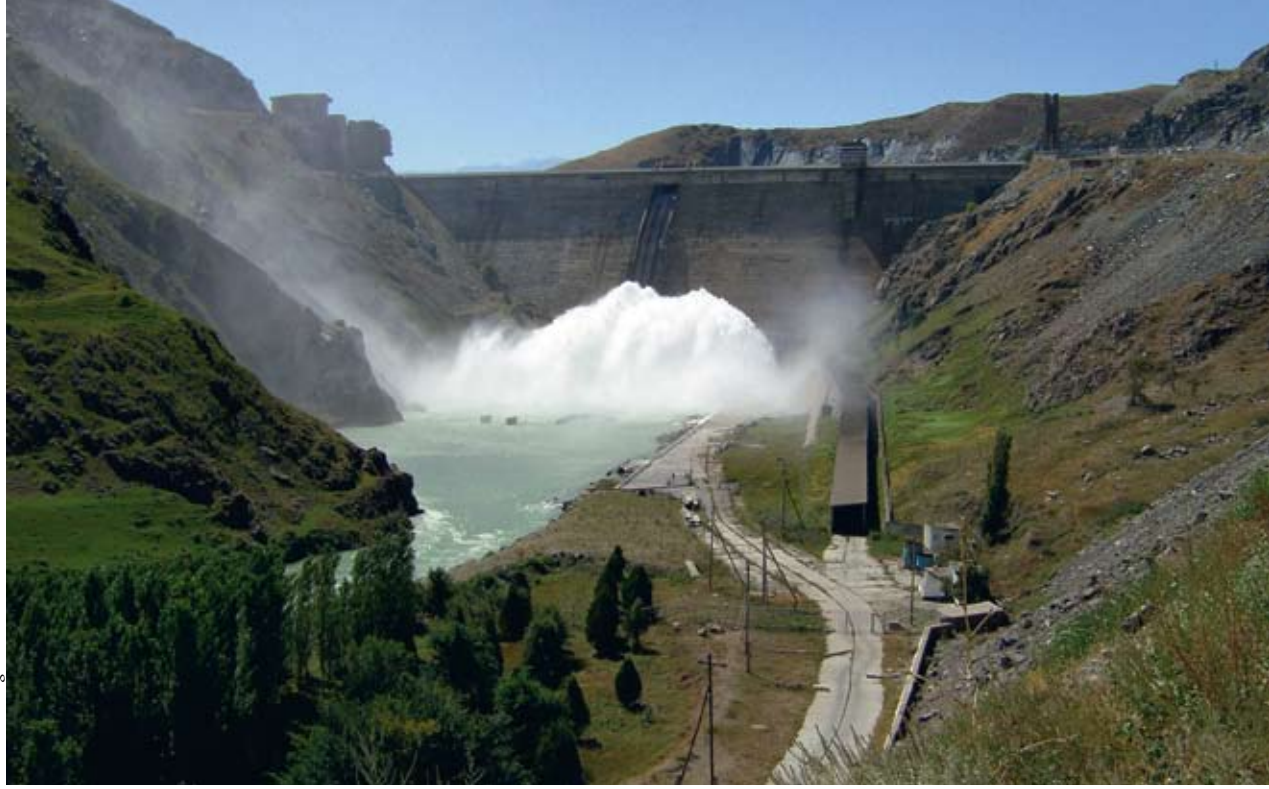

Photo: Kai Wegerich

Conclusion and Follow-up

The case studies show that the potential for corruption in water licensing is an important issue. It is at the heart of equitable and sustainable IWRM. Such studies can also help to better take local conditions into account in water policies and regulatory systems. Often such policies are developed with help of international organisations, building on experience in countries with better control mechanisms. Many local realities, however, imply dated infrastructures with low levels of monitoring and control mechanisms and a lack of data to ensure equitable resource distribution and proper law enforcement. Whereas legal reform is ongoing, a lot of water use and pollution still remains un-licensed and unregulated. This particularly relates to smaller users and to groundwater and wastewater pollution licensing. In view of the large number of users and the limited administrative capacities, creative solutions need to be found for proper allocation and control mechanisms without increasing bureaucracy and potential corruption. Extending effective informal systems may be more effective in some cases than building parallel formal systems for example.

In both market (Chile) and state-focused (Kazakhstan) water licensing systems, the potential for corruption exists with licensing being administered by under-funded, under-equipped, and under-coordinated regulating agencies. Risks in water licensing are apparent both in Chile, which scores well in Transparency International's Corruption Perception Index (CPI) rankings, and Kazakhstan where corruption is generally perceived as being much worse as reflected by its much lower CPI ranking. Both systems face important challenges, different in nature, but similar in effect (inequitable water distribution, lack of protection, sustainability and efficient use, systems skewed towards the powerful). This makes steps to reduce corruption opportunities important, but as indicated by Klitgaard (1998), this should not result in generating so much red tape and bureaucracy that the costs and losses in efficiency would outweigh the benefits of reduced corruption potential.

Preventive actions to reduce the risk of corruption in water licensing particularly relate to:

- Simplification of procedures for licensing (to reduce opportunities for petty corruption), including the possible application of more informal, traditional and local control mechanisms. Responsibilities of licensor and licensee need to be very clear and need to be properly enforced.

- Exploring opportunities for more equitable (initial) water allocation to avoid that powerful buyers can capture the market and to better protect local traditional rights
- Strengthening regulatory, administrative and monitoring capacity (through appropriate laws and resources) including the necessary legal mechanisms to redress abuses.
- Ensuring that licensing and control matches the local administrative and infrastructural reality so that rules won't just remain good intentions.
- Improve staff conditions in regulation and control agencies, including applying transparent staff nomination procedures, strengthening accountability measures and increasing staff remuneration to reduce risk of petty corruption (bribes).

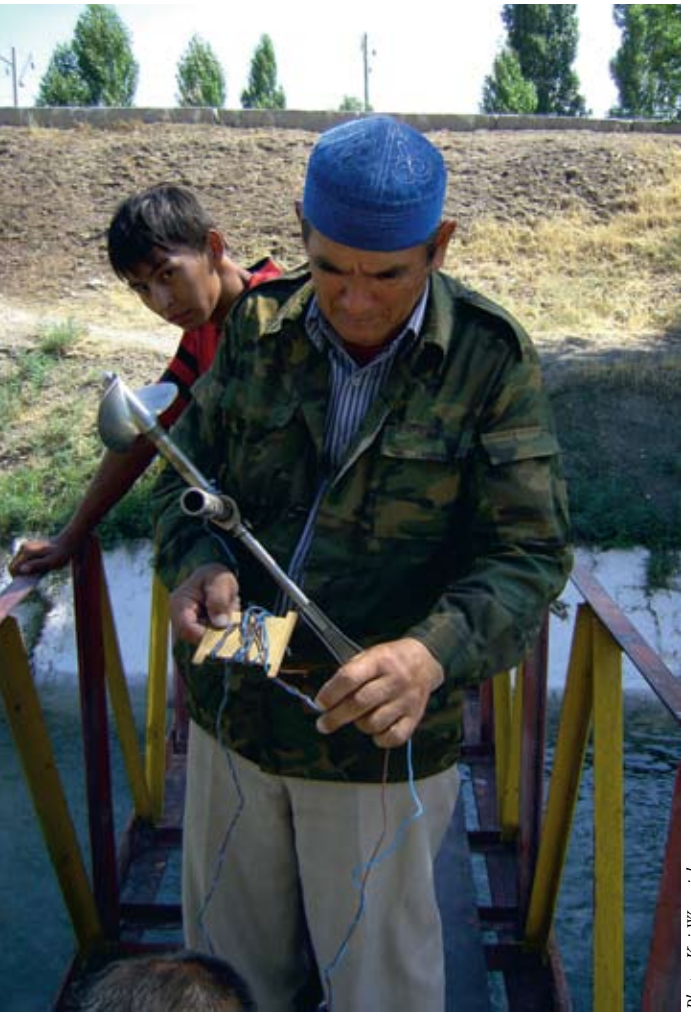

Photo: Kai Wegerich

- Improving coordination between IWRM organisations and stimulating the discussion around the need to reduce corruption risks. This is also very important in relation to transboundary arrangements which require transparent collaboration between organisations from different countries.
- Establishing independent oversight and encouraging civil society organisations (including possible independent funding) and the media to proceed with their important signalling role to balance the lobbying power of the private sector. For example, in Chile lively Internet communications have strong support from civil society organisations.
- Protecting whistleblowers and creating opportunities for anonymous reporting of problems.
- Improving public access to information concerning water license application, monitoring and enforcement. This may include public access to annual reports of agencies involved in the process but also improvement in the collection and processing of hydrological information and pollution data in support of monitoring.

Finding corruption risks in water licensing in two very different countries suggests that such risks also exists in many other countries, but as yet little attention is paid to this problem. This implies that the issue should be pushed up the agenda. Many people may already be aware of the need for improvement and further reform as shown by senior staff of the regulator in Chile, but they need to be encouraged to build alliances with other actors including civil society organisations. Broad coordinated efforts are needed that improve transparency, limit or control monopoly, and limit regulator discretion through streamlining the number of agencies involved, improving coordination and strengthening checks and balances. A good start may be to follow a similar approach as in this study by exploring corruption risks through literature review and interviews as an input for a broader discussion and follow up action. Preferably, this will be based on alliances between key institutions in IWRM including national and international research institutions and NGOs.

The challenge in better governance of water resources clearly transcends the water sector. But judging by these two cases it requires a detailed look at the issue of water licensing to improve equitable and sustainable resource management.

Photo: Alejandra Mora

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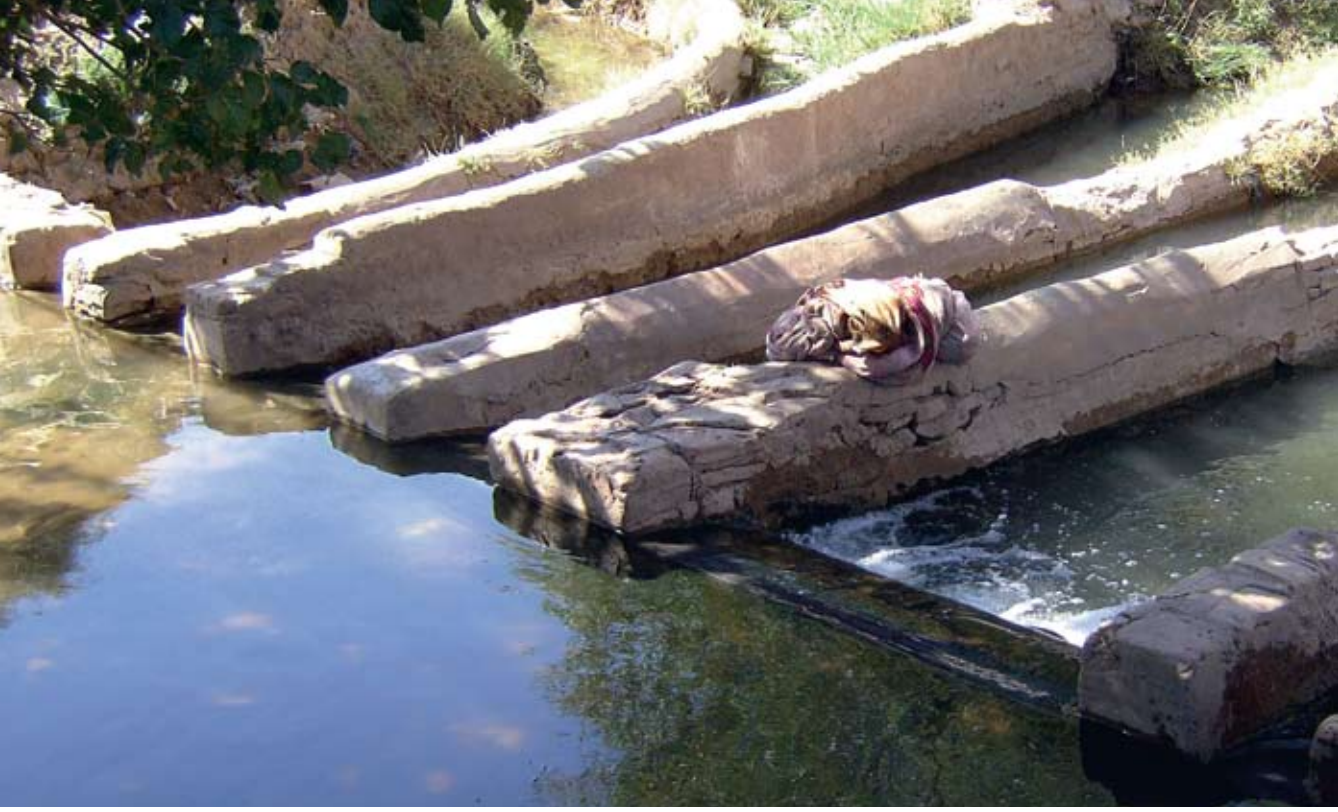

Corruption Risks in Water Licensing
With case studies from Chile and Kazakhstan

Water resource licensing is increasingly becoming a cornerstone for integrated water resources management (IWRM). Licensing and other allocation mechanisms are important because they underpin who gets access to water and provide a means to manage water fairly, efficiently and sustainably. Water licensing is often in the hands of young institutions operating under new laws and sometimes organised along water basins rather than traditional administrative boundaries. With growing water scarcity in an increasing number of countries, there is a significantly greater risk of corruption in the water licensing process. This risk, and its underlying factors, are not well understood. This report explores the nature of the risk using a 2007 field study of Chile and Kazakhstan as case studies for risk mitigation.

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