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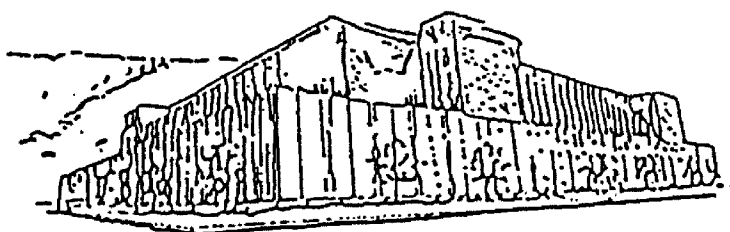
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PRIVATIZATION AND ITS INFLUENCE ON THE DEVELOPMENT OF LEGAL
ENVIRONMENTAL PROTECTION SYSTEM IN KAZAKHSTAN

by

Tatyana E. Kotenyova

B.S. Kazakh State Academy of Architecture and Construction, 1992

presented in partial fulfillment of the requirements

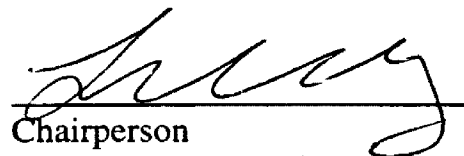
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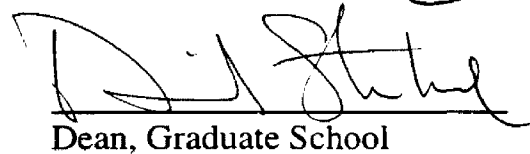
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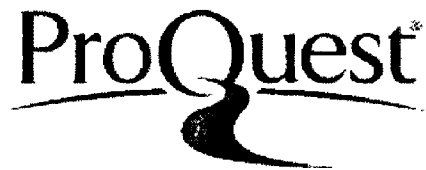


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Privatization and its influence on the development of legal environmental protection system in Kazakhstan (72 pp.)

Chairman: Leonard Broberg 

The collapse of the Soviet Union in the late 1980s and early 1990s has substantially changed the world map. The region once occupied by the Soviet Union now consists of a number of smaller countries (former Soviet republics), each of which is faced with a future of independent economic development and, as a consequence of this process, entrance into the world market. To meet world trade requirements, former Soviet Union republics, presently the Commonwealth of Independent States (CIS), made a fast transition to a market economy by means of one of the most prevalent capital raising techniques, privatization. As an example of the introduction of privatization process into the economy of CIS countries and privatization role in the development of environmental protection system, this paper examines the experience of the Republic of Kazakhstan, one of the largest of the former Soviet Union republics.

An important constraint in the privatization and market reform movement is the legacy of severe environmental degradation left by decades of inadequate planning for, enforcement of and government emphasis on environmental protection. The failure of the government property regime and the present transition towards a fully private property system make privatization play the role of catalyst for the ongoing creation in Kazakhstan of a new system of environmental protection.

This paper analyzes the current process to transition towards a market economy in Kazakhstan, the role of privatization in this process, and the way privatization can influence and improve the environmental protection system in Kazakhstan. An evaluation of the approach of the eastern Europe and western countries and a study of environmental liability and assessment in Kazakhstan were made. The paper concludes with recommendations for improvement and future development of environment protection system in Republic of Kazakhstan by means of establishment comprehensive environmental policies and enforcement frameworks to give order and uniformity to environmental issues arising in the context of privatization, employment of precautionary principle in regulation of environmental issues and greater public participation in decision making process.

TABLE OF CONTENTS

Abstract.....	ii
Table of Contents.....	iii
Chapter I. Kazakhstan before privatization.....	1
1.1. General information on the country, its legislation and society.....	1
1.2 The Environmental Condition of Major Natural Resources.....	7
1.2.1 Land Use.....	8
1.2.2 Endangered Water Resources.....	9
1.2.3 Air Quality.....	11
1.2.4 Nuclear Tests.....	11
1.3 Summary.....	12
Chapter II. Transition toward a market economy: Privatization and its influence on the economy and environment.....	14
2.1 Why privatize?.....	14
2.2 The Main Methods of Privatization.....	16
2.2.1 Sale of Shares or Assets.....	16
2.2.1.1 Competitive Bidding.....	17
2.2.1.2 Noncompetitive Sales or Transfers.....	19
2.2.2 Capital Dilution.....	20
2.2.3 Management-Employee Buyouts (MEBOs).....	20
2.2.4 Mass Privatization.....	22
2.2.5 Indirect Approaches.....	22

Chapter	Page
2.3 Summary.	25
2.4. Case study: Kazakhstan.	25
2.4.1 Results of Privatization in Kazakhstan.	30
2.4.2 Conclusion.	33
Chapter III. Privatization's management tools and their influence on the development of the legal environmental protection system in Kazakhstan.	34
3.1 Why Environmental Programs Through Privatization?	34
3.2 Environmental Audit.	35
3.3 Environmental Impact Assessment.	39
3.4 Risk Assessment and Risk Management.	41
3.4.1 Remedial Actions.	42
3.4.2 Contracts.	44
3.4.3 Insurance.	47
3.5 Kazakhstan: case study.	49
Chapter IV. Recommendations.	59
Glossary	68
Reference List.	69

I. KAZAKHSTAN BEFORE PRIVATIZATION

1.1. General information on the country, its legislation and society.

Five times the size of France and half the size of the United States, Kazakhstan is the largest state in Central Asia. This country shares borders with the Russian Federation on the north and west, Turkmenistan and Uzbekistan on the southwest, Kirgizstan on the south and China on the southeast. Among the former Soviet republics, Kazakhstan ranks second in area, fourth in population, third in economic output, and third in both energy production and consumption. Kazakhstan possesses enormous reserves of natural resources, which include coalmines in the north and the Tengiz oil deposits, the largest known oil field in the world, in its western region. Kazakhstan mines also produce a large quantity of copper, zinc, lead, bauxites, chromites, iron, silver, and gold. In agriculture, it was the only exporter of wheat among the former Soviet republics.

Being part of the USSR and thus a socialist state, Kazakhstan had to correspond to the state system of law. In other words, it was a system of developing social norms, which align with the power of the state. According to Soviet legal theory, the main features of socialist law were:

- 1) eradication of private property in the means of production,
- 2) eradication of the exploitation of people by other people and other forms of non-labor enrichment, and

3) protection of the public socialist property and absolute equality of citizens rights.

Among the modern legal systems of Roman-Germanic (Civil Law), Anglo-Saxon (Common Law), mixed, and Muslim systems of law, the Kazakhstani system of law can be described as a Roman-German system. This classification is valid not only for the period before the collapse of the Soviet Union, but for the present time as well.

The main source of law in Kazakhstan was and still is the *Normative Act*, an official written document, enacted by the authorized state body. Normative acts are classified by their legal power, that is, determined by the authority and type of state body issuing the normative act. Traditionally, in the USSR, classification was made between the constitution (the main law) and other laws that were enacted by the highest body of the state power, as well as sublaw acts. In the Soviet Union, the laws were enacted by the Supreme Soviet of the USSR, Supreme soviets of the union and autonomous republics and by public referendum. The right to enact normative acts was also a privilege of the following bodies: the Presidium of the Soviet of the USSR and the Presidiums of the Supreme Soviets of the Union and Autonomous Republics (decrees and resolutions), the Soviet of the Ministers of the USSR and the Soviet of the Ministries of the Union and autonomous republics (resolutions). This particular legal status was inherent to the mutual resolutions of the Central Committee of the Communist Party and the Soviet of the Ministries of the USSR, that were enacted in response to the most important events of the public and social life. Thus, decisions of the Communist Party on creation of new collective farms aimed at the production of monocrop cultures in Kazakhstan and

Uzbekistan, or launching the construction of a railway system in the Far East were later implemented in corresponding resolutions. Additionally, the ministries, departments and local soviets of the public deputies were authorized to enact the normative acts.

Three main hierarchy levels corresponding to the three major subsystems of the Soviet legislation can be distinguished:

- 1) all-Union legislation (federal legislation);
- 2) the legislation of the union republics; and
- 3) the legislation of the autonomous republics.

According to article 74 of the Constitution of the USSR of the 1977, the laws of the USSR had the same power on the territories of all Union republics. In a conflict between the law of the republic and the all-union law, the latter had more power. Article 68 of the Constitution of the Kazakh SSR of 1978 also confirmed this rule.

The development of legal regulation of the interaction between the society and nature in Kazakhstan, during the period of entrance into the USSR, was composed of three periods: land period, land-resource period, and ecology period.

During the first period, under Lenin's Decree "On Land" of 1917 and the Great October Social Revolution, all land was transferred to the exclusive ownership of the State. Thus, the legal land relations got independent status, determined by the specific methods of the legal regulation.

The further development of land law took the way of differentiation of land relations. With greater exploitation of other natural resources under the Soviet economy and accumulation of the legal enactments on mineral, forest and water resources, new

areas of law were separated from the land legislation. Those were forest, water and subsoil legislation.

Since land, subsoil, forest and water resources were the exclusive property of monopolist owner - the State - the law of natural resources, a new integrated area of law, was created. The primary goal of natural resource regulation was the administration of the rational use of natural resources in order to satisfy the economic interests and demands of society. As the negative results of Soviet economic activity became obvious, the new provisions on protecting the environment, not only the rational use of environmental resources, were included into the legislation. Thus a new branch of law evolved: the natural resource protection law. This period was called ecological, since in the first time in the history of the Soviet legislation the branch of environmental protection law was created.

To summarize, the history of administrative development led to the creation of environmental law as an aggregate of natural protection and natural resource areas of law. Their common ground was the State's exclusive ownership of the land, subsoil and water resources. At the moment of obtaining independence, Kazakhstan had a substantial amount of normative acts, aimed at the regulation of use and protection of natural resources, that had been enacted at both the Union and republic levels. Shortly after the collapse of the Soviet Union, all the former Soviet Republics started to remodel their legislation, including environmental one. In Kazakhstan, the new law "On Environmental Protection" was accepted in the 1991, but due to the transitional nature of the law, it was substituted in 1996 with the latest and currently valid version.

However, environmental legislation has never played a significant role in protection of the environment in Kazakhstan. Not only because of its weak structure, that can be described as a bazaar of norms and regulation that do not comprise a monolithic system; and more important, resources were viewed as the raw materials essentially valued as free for industrial and agricultural production; but also due to the lack of an enforcement mechanism in the judicial system, as well as a lack of public awareness. For seventy years of socialism, soviet citizens got used to the fact that not judicial decisions, but the order of the authorized State representative or even the head of the State enterprise was crucial in dispute resolution. Many authors argue that it was a legacy of Stalin's industrialization philosophy that paid little attention to environmental concerns (Blaikie and Brookfield, 1987). During those times, the Soviet Union pursued a drive towards rapid industrialization at all costs. This was an understandable and perhaps essential prerequisite to the survival of the socialist state (Zeigler, 1987). There are at least two grounds for such an assumption. First, the state had to protect itself against possible external aggressors and provide an industrial base to carry on war. Second, it created a large industrial working class upon which its internal political guarantees were based (Blaikie and Brookfield, 1987). Thus, the emphasis on industrialization, which permeated planning in all Soviet-bloc countries, together with the impossibility of citizens' suits against polluters, helped foster the modern development and use of environmentally unsound technologies. The idea of a socialistic society and socialistic State was planned to be distributed and adopted by other countries of Eastern Europe by any means. Quick and affordable industrialization did not take into consideration

environmental concerns.

Furthermore, the government policy on citizen's access to natural resources was based on the notion of free goods. There was a tendency not to charge for, or to under-price natural resources use. This meant that they "were not appropriately valued and were indiscriminately used as inputs in production and as sinks for pollution from industry" (Tisdell, 1997). Principles of "user-pays" and "polluter-pays" were uncommon for Kazakhstani environmental legislation during the Soviet era.

Additionally, the status of Russia as a center of decision making had a negative effect on Kazakhstani production plans. Very often no awareness of local environmental problems was shown and no local input was possible (Tisdell, 1997). Concerns about the local environment were put behind the Soviet centrally planned economy goals.

Finally, the governments of Soviet Union republics were too busy and interested in the promotion and exportation of their version of socialism to the rest of the world. The idea of a "perfect socialistic society" did not allow any place for environmental problems in the State. If those occurred, the government tried to hide them.

As long as the objectives of spreading the USSR's political and ideological influence in the world are the prime elements in government policy, our attitude to nature will not change. Among all the announced measures to protect the environment, there is one area where these steps have good effect: it is propaganda, the showcase. (Komarov, 1981 at 81)

The lack of freedom and communication media as well as the absence of a multiparty democratic government also contributed to the continuation of serious environmental problems in Kazakhstan. Nevertheless, the recognition of land degradation, pollution and waste undoubtedly existed in the republics of Soviet Union,

but sharp criticism ran the risk of being labeled anti-Soviet. Even the author of the above quote was forced to use a pseudonym in order to avoid the inevitable, sad consequences of his critique about the lack of environmental protection in Soviet Union. Thus, there was a strong disincentive to encourage environmental protection reform.

1.2 The Environmental Condition of Major Natural Resources

Kazakhstan's geographical position in the center of the Eurasian continent determines its hydrographic conditions, topsoil types, and wildlife diversity. The natural ecosystems of the largest part of Kazakhstan are known for their low tolerance of gaseous, liquid, and solid pollutants (Little, 1993). Moreover, half of the Republic's territory has an arid climate, which retards biological cycles, making wildlife replacement slower. In addition to dry climate, high temperatures in summer and severe winters are typical for most of the country.

The natural diversity of Kazakhstan was relatively untouched over the centuries because of the sparse population of this large territory and the absence of agricultural and industrial activities in most areas. However, in the middle of the twentieth century radical changes began to take place, largely as a result of the extensive exploitation of mineral deposits, the creation of industrial complexes in the eastern, central and southern regions of Kazakhstan, and the development of the "virgin lands" of northern Kazakhstan. These processes were accompanied by mass population migration from Russia, Ukraine and other republics of the former Soviet Union. Increased population and the establishment of large industrial complexes necessitated enormous increases in power

generation - reflected in the construction of hydroelectric power stations and over-exploitation of major river systems and the over-irrigation of Aral Sea, the only inland sea in Kazakhstan.

All these factors contributed to the growth of environmental problems. The large industrial complexes were developed under conditions of administrative monopoly without any consideration of their effects on the country's environment. The lead-zinc industry of Ust-Kamenogorsk, the lead-phosphorous industry of Chymkent, the phosphorous industry of Jambyl and chrome production in Aktyubinsk are considered to be the most harmful of these projects in the republic (Little, 1993).

1.2.1 Land Use

Most land in Kazakhstan is not suitable for agricultural purposes because of its aridity. About 88 million hectares of agricultural land are exposed to wind and water erosion at unacceptable levels. This constitutes 42% of all agricultural land and 22% of arable land. About 20 million hectares of steppe were ploughed up for cropland from 1954 to 1960, during the "virgin lands" campaign (Little, 1993). Among adverse consequences of "virgin lands" campaign were the loss of humus, which in North Kazakhstan during the past 20 years accounted for humus losses of between 25 and 30% (Little, 1993), degradation of soil characteristics, and decreased resistance to wind and water erosion.

Intensive and unsystematic exploitation of the best pastures has led to a decline in land productivity and deterioration of grass species. An extreme degree of degradation of

herbage has been shown in 60% of pastures (Little, 1993). Overgrazing in mountainous areas is prevalent, and is accompanied by strong erosion of slopes, which in turn leads to the creation of gullies and cliffs. The over-exploitation of the soil has been combined with contamination by industrial wastes, mainly heavy metals, as well as by pesticides, herbicides, and chemical fertilizers. Until the 1980s approximately 40,000 tons of both organic and chemical fertilizers were applied annually to agricultural fields (Little, 1993).

1.2.2 Endangered Water Resources

The water arteries of Kazakhstan constitute approximately 85,000 rivers and streams. Most of the rivers originating in the Tien Shan mountains lose a significant volume of water in Kyrgyzstan, China, Uzbekistan and are polluted with chemical contaminants in these bordering countries, thus giving rise to international problems.

The drinking water supply is mainly (56%) provided by underground water. Industrial groundwater consumption is between 45% and 55% (Little, 1993) of total industrial use. Much of the water supplied to cities in southern Kazakhstan comes from water-distillers and artesian wells. Additional water comes from mountain rivers and lakes. Kazakhstan's underground water reserves are 27.8 billion cubic meters and have a mineral content of one gram of salt per liter of water (Little, 1993). In desert regions of Chimkent, Kzyl-Orda and Jambyl thousands of water wells have been dug. Uncontrolled exploitation of such wells could have an extremely harmful effect on the desert environment and has already led to the irreversible change in local ecosystems. Over-exploitation of important rivers such as the Irtysh, Ili, Syr Darya and others have led

to serious downstream environmental damage. The ecology of the basin of the principal water artery, the Irtysh River, has been severely affected. Pollutants such as copper, zinc, cadmium, lead, and arsenic enter the river, along with industrial waste from metallurgical plants, with levels up to 200 times exceeding maximum permissible concentrations (Wolfson, 1990). Similar problems have arisen in the Ili River basin, in the Balkhash region, where the accumulated pollution by heavy metals and waste water from rice-fields, saturated with fertilizers and pesticides, has led to a heavy loss of bird and animal population and has affected their migratory behavior (Little, 1993). Another example is the Syr Darya River, which is the feeder river for the Aral Sea. The Syr Darya is highly polluted by pesticides (Wolfson, 1990).

The catastrophic drop in the water level of the Aral Sea is well known. Over the past 20 years the level of this inland sea has decreased by 17 meters, exposing a desiccated seabed of about three million hectares. Fishing and navigation have ceased. Every year up to 70 million tones of salt are blown by winds from the exposed seabed and are dispersed over thousands of kilometers (Wolfson, 1990). This has led to progressive desertification, increasing salinity of soil and the general impoverishment of flora and fauna. There have been changes in climate, and morbidity among people of the Aral region, especially children, has grown dramatically. All this destruction took place due to the consequences of irrigation project launched by the Soviet government in order to develop cotton and rice crop agriculture to the southwest region of Kazakhstan.

1.2.3 Air Quality

According to the Ministry of Ecology and Biological Resources, emissions of more than five million tons of harmful substances have polluted Kazakhstan's atmosphere every year, of which two million tons are generated by traffic. The highest level of atmospheric pollution is registered in the towns of Leninogorsk and Almaty (Little, 1993). The situation in Almaty is aggravated by the violation of basic architectural regulations and norms, which has resulted in the erection of buildings which impede mountain breezes and contribute to an accumulation of lead pollutants in the air from transport and industrial activities.

Power generating plants and the mining and metallurgy sectors are the other major polluters of the atmosphere. In the towns of the regions of West Kazakhstan, Taldy-Korgan, Semipalatinsk and Tourghai the same kind of pollution accounts for 60% to 80%, whereas in Almaty city it is as high as 90% (Little, 1993).

1.2.4 Nuclear Tests

The activities of the Soviet military-industrial complex gave rise to further ecological problems as well. During the past 40 years nuclear testing has rendered more than 19 million hectares of land unusable. Between 1949 and 1989 some 490 nuclear tests were conducted in the Republic, including 26 above-ground tests, 87 atmospheric tests and 354 underground tests - resulting in the release of 45 million curies of radiation into the atmosphere (Little, 1993). The affected zone encompassed 16 administrative districts of three regions: Semipalatinsk, East Kazakhstan and Karaganda.

According to the results of a health survey that covered inhabitants of 10 administrative districts exposed to an irradiation dose of 50 rem or more; 190,000 (70%) out of 253,000 inhabitants suffered radiation exposure (Little, 1993). After the transition to underground testing, radioactive contamination of the environment decreased and by the early 1980's had reached an acceptable level (Little, 1993). However, it is impossible to determine the extent of damage to the land, as well as on the health of the population. This matter requires intensive research. What is known is that when nuclear tests were conducted few measures were taken to adequately protect the population.

One of the most serious environmental problems involves the storage of radioactive waste. In 1991, 109 irregularities were noted in regard to radioactive waste disposal at 20 locations (Little, 1993). In the mine dumps of the Tselinny Mining and Chemical enterprise there are 66 million tons of radioactive waste in the tailings, with total activity of 68,000 curie, in Dzhambyl region there are 55 million tons of such waste; in Dzheskazgan region - 54 million tons and in the town of Ust-Kamenogorsk some 1.4 million tons of radioactive and toxic waste (Little, 1993) are stored.

1.3 Summary

At the moment of the collapse of the Soviet Union in 1991, Kazakhstan represented a country with tremendous mineral resource potential, relatively highly developed industry but a weak Soviet standard for environmental protection. Inefficient management of industry and agriculture, the lack of environmental legislation and enforcement, the domination of military considerations, and unregulated nuclear

detonations have all led to the severe ecological problems such as soil erosion; contamination by industrial wastes, pesticides, and chemical fertilizers; and degradation of water and air quality.

II. TRANSITION TOWARD A MARKET ECONOMY: PRIVATIZATION AND ITS INFLUENCE ON ECONOMY AND ENVIRONMENT

2.1 Why privatize?

If we date privatization's recent flowering from Margaret Thatcher's initiatives in the late 1970s, it has been popular for more than fifteen years, (Berg and Berg, 1997 at 357). The term "privatization" encompasses a variety of methods and techniques to transfer ownership and control of government entities, functions, and activities to the private sector. Feigenbaum and Henig (1997) argue that there are at least three types of privatization:

1) systemic, that is "privatization as a grand political project" (Feigenbaum and Henig, 1997 at 340);

2) pragmatic, that is based on the concept of cost-benefit analyses and other resource-saving schemes;

3) tactical, privatization which policy "developed to achieve short-term political goal"(Feigenbaum and Henig, 1997 at 342).

Systemic privatization is characteristic for the former Soviet block countries. It is motivated by a wish for long-term transformation of society. As the economies start to be privatized, "the governments replace the Soviet regimes and create the beginning of a capitalist system" (Feigenbaum and Henig, 1997 at 340).

Around the globe, privatization is behind many structural reforms that have deep social and political consequences. Many privatization effects can be positive, leading to economic growth, improved efficiency and the transition to a stable market economy. In other cases, privatization can seem to harm the economy over the short term it is designed to help, when the burden of restructuring interrupts growth or increases unemployment, or when undeveloped legal systems allow corruption to become epidemic.

State owned enterprises are increasingly viewed as a philosophically inappropriate activity for state ownership. More practically, most state enterprises have been unable to operate at a profit, causing a drain on state resources. In this situation, privatization is viewed "as a means of reducing the drain on national revenue used to subsidize state owned enterprises, a way to raise revenue to improve infrastructure, and a possible future source of revenue if private ownership means improving efficiency to the point of entrance and competing in world markets and increasing national exports" (Berg and Berg, 1997 at 361). Additionally, privatization is viewed as a better way to provide goods and services demanded by a nation's population. Moreover, in some developing and transition economies privatization was sought by international lenders such as the World Bank or the European Bank of Reconstruction and Development to reduce their national debt through the sale of state owned enterprises and the elimination of the government subsidies. Therefore, it is clear that privatization does not occur everywhere for the same reason.

2.2 The Main Methods of Privatization

Among the main methods of privatization there are five categories that are most prevalent:

- 1) sales of shares or assets;
- 2) capital dilution;
- 3) management-employee buy-outs;
- 4) mass privatization,
- 5) indirect or partial privatization via management contracts, leases or service contracts (Berg and Berg, 1997).

2.2.1 Sale of Shares or Assets

This method of privatization comprises the sale of full or partial ownership of a state enterprise by public offering on stock exchanges by competitive bidding for shares or assets or by noncompetitive placement of shares. Under this method, the state sells to the general public through the stock market and other financial institutions all or a substantial part of the stock it holds in a going concern (Boycko, Shleifer and Vishny, 1995). The initial public offering is often combined with other methods, such as sale of shares to employees on favorable terms.

Public flotation is politically appealing and has great revenue-raising potential. It allows broad ownership, which is always more popular than a sale to powerful domestic or foreign buyers. Wider stock ownership is a common objective in most privatization programs, as it was for example in the United Kingdom, Jamaica, Chile, and Germany

(Berg and Berg, 1997). Public flotation is flexible as well. It allows targeting of particular groups to meet political objectives or social purposes.

Another advantage of public offerings is its transparency. Prices are set by the market for all to see, and for anyone to buy (Berg and Berg, 1997). Taking into consideration the fact that one of the main obstacles to privatization is widespread public concern about corruption, this is a weighty advantage.

The characteristics of initial public offerings that make them attractive also make them hard to implement, especially if speed of transition is an objective. Their clarity and transparency bring tremendous transaction costs-such as preparation for sale, valuations and managing the offer. As a result, only larger state owned enterprises or large government holdings are usually appropriate for this type of privatization.

2.2.1.1 Competitive Bidding

Sale of either part or all of state owned enterprises' shares or assets by public tender is the most common privatization instrument worldwide (Boycko, Shleifer and Vishny, 1995). Most small firms in transition economies were privatized by auction. For small retail shops, small-scale transport and service operations generally, auctions are quick, present few valuation problems and can generate revenue for the state budget. Problems arising from asymmetry, when present managers know more about the firm than outsiders, are relatively small (Berg and Berg, 1997).

Sales of medium and large-scale enterprises are usually done by formal tendering (Kikeri and Nellis, 1992). As with share flotation, transaction costs can be substantial if

the tendering is done right. It is necessary "to audit and brought up-to-date the accounts of the firms to be privatized, determine liabilities and assets values as well as to estimate future profitability"(Berg and Berg, 1997 at 162). Pre-privatization analysis should yield suggested minimum selling prices and result in the preparation of an informational memorandum for potential bidders. Governments are presently interested not only in the price during the sale, but whether the buyer commits to maintaining employment or injecting new investment.

For large firms, the pre-transaction preparation work is often done by investment banks or management consulting firms. Sometimes financing from foreign aid sources is involved. The consultants also help with marketing through contacting potential buyers and advertising. This type of privatization will be favorable for providing the environmental audit and consider the environmental protection issues in the framework of general financial audit.

Some companies cannot be privatized as going concerns because uncertainties about their contingent liabilities are too considerable. In this case they can be dissolved and liquidated and their assets sold without attached liabilities. This is an extremely common phenomenon, as well as "a major source of confusion in statistics on numbers of privatization and liquidation" (Berg and Berg, 1997 at 367). Thus, privatization by means of liquidation is not the best way to implement during privatization in order to meet the environmental protection and environmental liability requirements.

2.2.1.2 Noncompetitive Sales or Transfers

These kind of sales can take many forms. The state may find it advisable to sell to a pre-selected buyer without competitive bidding. A noncompetitive sale may follow a failed tender. Placement of shares with insurance companies, pension funds, and other financial institutions is a common noncompetitive means of privatizing ownership. Restitution, the return of companies to former owners, is also one of the forms of noncompetitive sales. Joint ventures or mixed companies are other noncompetitive methods. Private partners often have so-called preemptive rights, the right of first offer when the public partner decides to sell shares. Finally, transfer of shares to trusts can be included in this list.

The benefit of noncompetitive sales is that they can be cheaper, easier and quicker than alternative methods (Kikeri and Nellis, 1992). Negotiations in this case can be more flexible than in formal bids (Berg and Berg, 1997). Political and social objectives can be well-targeted since the shares can be distributed to underprivileged groups, or to employees and other stakeholders or to pension funds or insurance companies. Although noncompetitive approaches satisfy many objectives they suffer from one major disability: they are less transparent than competitive methods, and as such are often attacked as fairly corrupt. Additionally, in this type of property transfer it will be difficult to trace the environmental liability distribution or promote an environmental audit among employees or other stakeholders, since it will not be in their interest to bear environmental liability for the past contamination.

2.2.2 Capital Dilution

Privatization can occur without the state disposing of any of its properties, but rather adding to it allowing a private investor to buy in. The result is a capital increase, with the governments' share declining. Many joint ventures are formed this way. Capital dilution is an easy vehicle to transform partially private companies to more fully private firms.

Capital dilution is often politically acceptable, since the government retains a large or even majority share in ownership. This approach gives the undercapitalized entities new life, although the problems of working capital scarcity may remain. It is also a very fast process. However, risks do exist regarding transparency and equity, notably in share prices. In many countries "there are no rules for how share prices should be determined in cases of internal acquisition" (Berg and Berg, 1997 at 168). In addition, this method of privatization is not encouraging in terms of bringing in outside funds for environmental improvements.

2.2.3 Management-Employee Buyouts (MEBOs)

There are three main types of management-employee buyouts, which were implemented in different privatization programs. They are differentiated by the size of the privatizing enterprise. Thus, in many transition economies, small establishments, like restaurants, hotels, trucks and buses are sold to employees. Countless privatizations were made in this way.

The second type of MEBO involves employee stock ownership of medium and large-scale enterprises. These are very common in industrial countries.

The third and the most common form of MEBO is *de facto* insider domination of nominally open privatization. It was highly employed in privatization of Russian industry. The Russian model took the form of a voucher program that gave special preferences to employees of state enterprises, usually resulting in MEBOs in practice (Boycko, Shleifer and Vishny, 1995).

MEBO addresses one of the central obstacles to privatization, particularly in transition economies where ownership rights and traditions are vague and not well protected: the fact that finding a new owner means disenfranchising existing stakeholders. Enterprises' "insiders", such as workers and managers, have a traditional and *de facto* claim on the enterprise. Generally, insiders both care more about "their" enterprises than most others and know more, which gives them bargaining leverage (Boycko, Shleifer and Vishny, 1995).

In addition, it is unlikely that environmental factors are considered in the process of setting prices for those shares distributed to workers or in leases. However, since these preferential schemes are transfers of public resources to specific groups of citizens they do raise several issues related to equity and efficiency, e.g. why should some citizens have the right to acquire ownership and not others and does employee participation in ownership increase a firm's productivity. In exchange for this preferential treatment, it could be reasonable to include special environment-related condition in share distribution or lease agreements, such as an obligation to bring the facility's operations into

compliance with environmental requirements within a certain time period.

2.2.4 Mass Privatization

Mass privatization privatizes hundreds or thousands of enterprises at one time. To make this possible, they generally combine one or more of the above techniques with some sort of free distribution of assets, shares or buying power over assets (vouchers). This method was widely employed in a number of transition economies. The reason for this is the fact that in the transition economies, almost every industrial production and most output in other sectors was generated in the state sector. The huge scale of privatization alone "ruled out the "classical" sale as a single or main method (Berg and Berg, 1997 at 378)." Another reason is that valuation of state enterprises in these economies was difficult and uncertain, due to the lack of a market track record and persistent distortions that ruled out easy estimates of existing viability and future profitability. Furthermore, small domestic savings, weak or nonexistent capital markets and embryonic market institutions made private buyers few and wary. Foreign investors could and actually did play some role, although new governments and their publics found unacceptable the idea of selling off large parts of the economy to foreigners.

2.2.5 Indirect Approaches

Among indirect approaches there are several techniques: management contracts, lease contracts, concession and contracting out. Managing contracts privatize management, leaving ownership in state hands. Some of the managing contracts involve

straight fees, some not. In most cases payments are tied to performance. The key issue for determining success is whether performance is related to the contract terms, and whether managers have true autonomy in hiring and firing. A recent World Bank study found that management contracts have improved both productivity and profitability in most of the case studies (Shaikh and Minovi, 1994).

Lease contracts are of different types, varying mainly by the party responsible for financing investment. Under straightforward leasing the contractor or lessee pays the public owner a fee for the right to operate a public facility and bears the financial risks of its operation. This method is widely used in power, ports, urban transport, waste disposal and industry. The private firm finances working capital and replace non-durable capital assets, with contracts generally running five to ten years. The contractors collect tariff revenues directly and pay a share to the government. In this case regulatory burdens are considerable.

Concessions involve greater contractor responsibility than leases, notably for replacement of fixed assets. They also last longer, usually from fifteen to thirty years. Among the common areas of usage are water supply, waste disposal, toll roads and ports. One variant coming into wide use is the creation of two separate companies, a *societe de patrimoine*, which is an operating company that owns the assets and is 100% state owned, and a *societe de exploitation*, which is majority owned by a private operator with minority state ownership. Although this method has become very popular, it also raises problems of coordination, because the *societe de patrimoine* is responsible for new investment and may not always consult with the operating company about investment

policies.

Contracting out or subcontracting is widespread in public sector provision. It is an extremely diverse form of privatization, especially common for municipal services, and is widespread in the United States (Berg and Berg, 1997). Examples include security and janitorial services, data processing and food service.

Contracting out has efficiency advantages that are of special value in low income countries. It allows state owned enterprises or central governments to employ specialized skills they cannot otherwise afford to recruit or retain because of low salaries in the public sector. It also allows the use of specialized skills that are not needed full-time. Nevertheless, some problems beset contracting-out privatization. First, it requires substantial decentralized capacity in bid preparation, specification of norms for contracted services and payment systems that are prompt. It is also open to abuse and corruption. And finally, public employees, like private sector workers generally dislike use of outside resources.

The main objection to indirect privatization methods is that they are often substitute for all-out privatization of ownership, or “real” privatization. However, management contracts, leases and service contracts can be first steps, opening up further privatization prospects in situations where full privatization is not feasible or desirable. The partial and tentative nature of these methods can be beneficial in that it makes them more politically acceptable than full divestiture.

2.3 Summary

The success of the transition of state owned property to the private sector depends on several factors. They are: speed of privatization, the level of administrative discretion employed, transparency, access to information, and whether or not privatization is administered by a government agency differing from one which previously owned the assets. Applying these factors to the most common methods of privatization, it generally appears voucher-based mass privatization is the most successful, since it shares advantages on all relevant dimensions. In contrast, management employee buyouts are highly conducive to corruption in their implementation, principally due to its slow pace, and lack of transparency.

2.4. Case study: Kazakhstan

Kazakhstan declared its sovereignty from the Soviet Union on October 25, 1990. With independent state status, Kazakhstan embarked on a massive economic reform program that continues today. As a part of this process, the government liberalized prices, made efforts at decentralizing planning, and initiated the breakup and privatization of the state-owned enterprises.

The growing movement to privatize and reform the economy of Kazakhstan started less than ten years ago. From 1991 to 1998 three privatization programs were carried out in Kazakhstan. The first program of denationalization and privatization started on June 22, 1991 and continued until 1992. It was aimed at sale of trade and service sphere objects as well as conversion to the associated labor units from the state

property. The state program on denationalization and privatization in Kazakhstan from 1993 to 1995 covered not only small-scale privatization, but also mass privatization, case-by-case privatization and privatization of agriculture sectors via leases or service contracts. Finally on February 27, 1996, the government affirmed a third program for privatization and reconstruction of state property in the Republic of Kazakhstan.

Between 1991 and 1992, more than 6,200 state owned companies were privatized in Kazakhstan. More than half of the privatized firms became collectives, 35% became private companies, eight per cent established joint stock companies, and the rest were leased enterprises. Within the first year, 14 % of the collectively owned companies decreased production or were closed altogether. An additional 25% experienced production difficulties and some 30% changed the nature of their production (Privatization Update Kazakhstan, 1997). About one-third of the companies were doing relatively well but mainly because they increased prices. The failure of the privatization program at this stage was partially caused by shortcomings inherent to the collective form of ownership, and partially because of the chaos associated with rapid ownership transfer.

As mentioned in section 2.1, the main feature of privatization is its politically based objectives. In Kazakhstan the systemic method of transition was employed. Thus, privatization was not a goal, but a means to solve problems that had accumulated in the past. Kazakhstani government sought to change ownership structure as well as to create an efficient economy.

The initial stage of privatization in Kazakhstan was impeded by a number of factors. First, an inventory of the small businesses subject to privatization was not

completed, and as a result, a significant number of companies to be sold at auction were withdrawn (Privatization Update Kazakhstan, 1997). Second, little interest was shown on the part of the population in the privatization of small business because of the reduction in buying power and auctioning of less attractive businesses. Third, attempts were made on the part of management and workers of some small businesses to discourage selling their companies (Privatization Update Kazakhstan, 1997). One way of doing this was to inflate the initial asking price. Another was participation of company representatives at the auction and calling higher prices so that an outsider could not afford the purchase. A refusal to pay the named price would follow resulting in removal of the company from the sale until the next auction. Fourth, was the closing of companies for a long time due to the lack of funds for repairs and inability to start production, trade or any other activity. Finally, privatization was impeded by the resistance of local authorities who lost both business and their share in the profits of these businesses.

However, the significance of the mass privatization is difficult to underestimate. The Kazakhstani mass privatization scheme was rather different from those in Russia and Eastern Europe. It was called one of the most ambitious of the five Central Asian states (The Economist, 1994). In Kazakhstan, privatization investment coupons have been handed out to the country's seventeen million people. Thus, equal buying power conditions were created for all the people living in the country. Coupons could not as in most other schemes be used to buy shares in companies directly. They could not be sold for cash, because the government wanted to avoid the Russian experience where shares were sometimes sold before the recipients understood their value. They could be

exchanged only for shares in investment funds, which use the coupons for buying up companies and reducing the investment risk for the population. Shares in the funds could be sold only after the privatization process was completed. As a result 1,600 enterprises were sold from the auction through the investment funds (Program on Privatization and Reconstruction of the State Property in the Republic of Kazakhstan, 1996).

The privatization process also started with the restructuring of state enterprises into joint stock companies. From the inception of privatization in 1991 about 3,000 joint stock companies have been formed. As a result of mass privatization 50.6% of state-owned enterprises have gone public, 43.5% of agricultural enterprises and 5.9% of industrial projects have been privatized (Program on Privatization and Reconstruction of the State Property in the Republic of Kazakhstan, 1996).

Privatization, pertaining to individual projects, with the participation of strategic (both foreign and domestic) investors has brought positive results in terms of efficiency, competitiveness and improvement of the enterprises' management in the transition economy. At the same time, individualized privatization is characterized by delayed implementation, due to the need to fulfill certain requirements pursuant to the project's preparation and to delays in choice of the sales method. In the Kazakhstani approach, large industrial enterprises, frequently natural monopolies, tend to undergo individualized privatization, as well as those enterprises with a high profitability potential.

Kazakhstani program of denationalization and privatization envisions several methods of *individualized privatization*: selling the project to a certain investor for agreed upon certain terms, selling at auction, management contracts, and public offerings. The

individualized privatization program envisioned the sale of no more than 49% of the stock to a single investor; though in some cases this provision was reconsidered and an investor bought up to 90% of the company's stock. For example, the sale of 90% of Shimkent confectionery's stock to the American company Nabisco brought \$65 million into the state budget, including \$25 million in the form of investments (Privatization Update Kazakhstan, 1997).

What is Kazakhstan's advantage in signing management contracts rather than choosing direct privatization? The management contracts preserve the country's property; the enterprises are able to secure considerable amounts of cash in the form of investment and debt payments; the enterprises also benefit from the knowledge, experience and state-of-the-art technology which allows the local managers to navigate the market economy to improve industrial and economic links with the domestic and foreign partners and provide both government and foreign investors with the flexibility to privatize the object upon expiration of the management contract.

The second stage of privatization in Kazakhstan (1993-1995) has introduced considerable qualitative change. It raised denationalization to a fairly high level. In industry, state-owned enterprises account for 40% of overall production volume, in agriculture, the state's share is only 3% (Privatization Update Kazakhstan, 1997). However, the main goal of creating an efficient private sector and a competitive environment has not yet been achieved. Lack of a proper legal base has impeded the formation of a conscientious owner. Concerned with this fact, on February 1996 the Kazakhstani government enforced the third program on privatization and reconstruction

of the state owned property for the period of 1996-1998 years. This stage involves selling the remainder of targeted state properties and of implementing individualized privatization projects, creating conditions and legal guaranties for the establishment of domestic management companies and their participation in the privatization, establishment of the state system, protecting the interests of the securities' investors-owners, as well as the activities aimed at managing the state property (Program on Privatization and Reconstruction of the State Property in the Republic of Kazakhstan, 1996). The significant achievement of the third privatization program is providing environmental protection and rational use of natural resources during privatization. Unfortunately, this is the only provision in the last three privatization programs that is aimed at prevention of Kazakhstani environmental degradation during the transition of the state owned enterprises to the private sector.

2.4.1 Results of Privatization in Kazakhstan.

The transition in Kazakhstan revolves around the success of privatization. The privatization programs were designed to reduce the state sector's share, and thus, to break up the bureaucratic structures of the former command economies, to increase the number of property owners, to improve management, to increase the efficiency of industrial activities, and to encourage competition in the emerging securities market. Privatization is not only the transition of the property rights but also liabilities referred to the past, present and future activity of the enterprise. Environmental liabilities are one of the top concerns of most investors during privatization.

Privatization also offers an important environmental opportunity. The investor's need for regulatory certainty can accelerate the process of putting in place more comprehensive environmental regulations. Additionally, coordination between environmental and privatization authorities will help to set in place appropriate environmental regulations and liability policies and at the same time keep privatization on track.

In general, the results of privatization in Kazakhstan look rather positive, although statistics do not reflect many of the problems that occurred during the transition of the state owned enterprise to the private ownership. These problems include increased unemployment, decreased production, declining labor productivity, slow transfer rates, slow progress in privatizing and flourishing corruption.

One of the most severe obstacles towards success of privatization in Kazakhstan is corruption in all its kinds and variations. It has had significant economic and environmental consequences. Corruption crushes the market by altering supply and prices. It slows economic growth and reduces investment. Corruption obstructs confidence in public institutions and harms the development of democracy. Corruption leads to bribery when officials are poorly paid and state agencies hold arbitrary power (Lusk, 1997). Unfortunately these conditions are present to a great degree in Kazakhstan.

So far, there have not been many positive effects of privatization on the environment. During privatization a big number of industry enterprises were liquidated or became bankrupt due to low competitive ability in the emerging free market. Thus, the major industrial polluters stopped production and correspondingly the contamination of

the environment. Hopefully their new owners will be concerned with employing more environmentally friendly technologies in production and be able to keep lower pollution levels to meet requirements of environmental regulations.

Additionally, privatization results in the formation of a class of private owners, or middle class, as the base of a market economy. With the private property notion comes an understanding of the meaning and value of environmental resources.

Kazakhstan is also poised to further reform its institutions. Privatization has created a substantial class of property owners who increasingly demand reforms that assure not only protection of property, contract enforcement, and healthier environment.

Among the positive influences of privatization is the fact that the implementation of this process and the divestiture of state property compels enterprises to operate more efficiently, necessitating the dismissal of unproductive and surplus employees. In this way a potential pool of workers are available to the expanding private sector. Firms are now legally controlled not by politicians with perverse interests, no connection to efficiency and lack of environmental concern, but by managers and outside investors who are interested in better efficiency.

Finally, transition of the state property rights, as an indicator process of emerged democracy in Kazakhstan, brought the common public strong beliefs and opportunities to not only to improve the economic situation in the country, but raise environmental awareness as well.

2.4.2 Conclusion

As a new phenomenon, privatization in Kazakhstan has raised new issues for both local society and foreign investors. Privatization has become a process based on a mix of law and policy. The policy in Kazakhstan looks very pro-privatization, but is backed by weak laws which do not answer many important questions. Although the transition towards a market economy in Kazakhstan has weakened the central state and its ability to enforce the rule of law, power has not yet been turned over to representative institutions. Efforts to enforce environmental regulations will be minimally effective until western standards on law enforcement and the role of the judicial system are introduced and utilized.

As with most of the non-market economy nations, Kazakhstan applied foreign experience in adopting the privatization mechanisms. Presently the government of the Republic is making an effort to develop the environmental legislation of the country. A concern related to the transition of Kazakhstan's economy is a rapid reform of property status relative to the slow development of environmental legislation to protect resources from overexploitation or destruction. Indeed, economic reforms were made without taking environmental requirements into consideration. This can be explained mainly by the lack of a modern system of environmental requirements and the absence of a mechanism for implementing existing requirements as well as the absence of economic incentives for environmental protection.

III. PRIVATIZATION'S MANAGEMENT TOOLS AND THEIR INFLUENCE ON THE DEVELOPMENT OF THE LEGAL ENVIRONMENTAL PROTECTION SYSTEM IN KAZAKHSTAN

3.1 Why Environmental Programs Through Privatization?

There are several reasons why privatization programs make excellent conduits for environmental policy. First, by including the issue of environmental pollution within the context of the privatization transaction, the state may impose non-regulatory conditions on the property being privatized. The government can evaluate the scope of the problem, assign liability for past and future pollution, and impose a compliance schedule on the purchaser. Second, including environmental regulations in privatization transactions puts industry on notice that government regulation efforts are legitimate and that industry must bear the cost of pollution. Finally, the government could include directives to private purchasers regarding environmental liability and site assessment responsibilities in existing guidelines for the preparation of privatization proposal. Providing this information would be an efficient and inexpensive way for governments to communicate environmental policy to potential purchasers.

As mentioned in a previous chapter, early privatization efforts in Kazakhstan did not bring crucial practical changes in both law and economic structure to improve the local environment. In this situation, introduction of some environmental policy tools that are widely employed in Western and European countries during property transfer would be very helpful. Additionally, the concept of environmental liability is very new in

Kazakhstan. To meet the threat of environmental liability, western investors have developed a number of risk management tools to control unjustified financial exposure as part of acquiring properties with environmental problems. The great majority of Western European and North American corporations and companies are now using these risk management measures wherever they invest. While some of the procedures and mechanisms are well-known to officials in Central and Eastern Europe as well as in the countries of Commonwealth of Independent States, others are not yet widely accepted and may be encountered for the first time in deals involving both foreign and local investors. Some of these risk management tools can also help Kazakhstan to address environmental problems accompanying industrial activity.

3.2 Environmental Audit

The term environmental audit refers to a “*due diligence* review to determine the nature and extent of contamination or other environmental damage on a property from past industrial operations, whether on- or off-site”(Goldenman, 1994 at 61). In addition, one type of environmental audit can provide a “baseline” description of the environmental condition of the property. This type of audit is usually employed if industrial operations are continuing on the property and the “environmental audit will consider the operation’s state of compliance with current and foreseeable regulatory requirements”(Goldenman, 1994 at 61). The creation of a “baseline” can help the buyer and the seller better define the environmental liability risks of a property. The

International Chamber of Commerce considers an environmental audit as a management tool, used to systematically and periodically evaluate the performance and management system of the company (Goldeman, 1994).

The scope of an environmental audit depends on the nature of the activities that have occurred on the property, past as well as present. According to the past experience of the western investors, properties with a history of industrial use generally require more detailed audits because of the likelihood that a contamination problem exists.

Like environmental liability in general, environmental audits require a legal reference point, usually the environmental laws in place in the country where the audit is taking place (Goldenman, 1994). If country-specific standards are absent, a careful and responsible investor will usually employ the most stringent international standards as a precaution. For example, since United States law establishes strict liability for clean up hazardous waste costs, a primary focus of environmental audits in the United States is on signs of contamination by hazardous substances (Goldenman, 1994). Many investors are concerned that other countries might establish similar environmental liability regimes. Thus, it is not unusual for pre-acquisition environmental audits to inspect for signs of contamination from past industrial operations even in countries where such liability regimes are not in place. Nevertheless, the standards are policy choices. The risk of using the highest standards for environmental audits is that they may result in decisions about remediation that are more costly than the host government might otherwise have chosen.

Environmental audits are usually carried out in phases. The first phase of the audit, also known as a preliminary evaluation or initial screening, looks at reasonably available information. It is aimed at three main goals:

- 1) to determine the historical uses of the site;
- 2) to determine its regulatory status; and
- 3) to figure out if there are any physical signs of environmental problems.

If no environmental problems are discovered, the audit will end on this stage. On the other hand, signs of possible problems may lead to a more detailed investigation. The last phase of the audit consists of detailed planning and cleanup, if necessary.

Based on the experience of Western investors, it is reasonable to recommend the following scheme for implementing the environmental audit procedure. The first phase of audit often begins with a questionnaire, directed at the property's current owners or managers. The questions are designed to gather information on the history of the property and its various uses, and to identify possible environmental problems. The practice of reviewing of public records for relevant information is also employed. Its usefulness depends, of course, on whether public authorities gathered such information in the past and keep it to the present. There are five main points of coverage:

- 1) the types of industrial operations which have occurred on site,
- 2) and whether these operations or process were regulated;
- 3) whether hazardous waste was produced:
- 4) if waste was deposited there; and

5) if environmental authorities have taken enforcement actions against the facility.

This information is summarized in the environmental audit report. The report should include information on any evidence of on-site contamination, history and current status of compliance with environmental regulations (Goldenman, 1994), and any recommendations for further investigation or remediation. If remedial actions appear to be necessary the report should state the reasons and provide the cost and time estimated for recommended actions. According to the past data, the first phase of audit takes approximately three to four weeks, and can cost in the range of seven to ten thousand US dollars for a small to medium facility and to five million US dollars for a large enterprise with multiple sites and complex industrial processes (Goldenman, 1994).

The second phase of the audit can also vary in its comprehensiveness. At a minimum, samples of soil and groundwater will be gathered for laboratory analysis for presence of contamination. At the other extreme is a full site characterization to determine the extent of any contamination and to estimate costs of remedial action, which can include drilling of monitoring wells to ascertain the extent of groundwater contamination. The second phase of the audit can last from one to four months. If extensive soil and groundwater analysis is involved, costs can multiply as high as one million US dollars for large and complex industrial operation (Goldenman, 1994).

It is reasonable to indicate one of the most common problems that investors run into. This is a problem of obtaining permission to conduct on-site pre-acquisition audits. Based on the experience of Eastern Europe, in some instances authorities were suspicious

that the environmental audit was a “subterfuge for carrying out industrial espionage (Goldenman, 1994 at 63).” In other instances, enterprise management was afraid that the audit would uncover incriminating evidence of past violations of environmental requirements. In this case it is necessary to take into consideration and draw up a contractual assurance that both parties will maintain the confidentiality of information obtained by the environmental audit.

3.3 Environmental Impact Assessment

Contrary to an environmental audit, an environmental impact assessment is used to identify and evaluate the future environmental consequences of a proposed development. Such a development could arise in the context of privatization if a prospective owner intends a significant expansion or alteration of a facility’s operations.

Almost all EE and CIS countries already have environmental impact assessment requirements (Goldenman, 1994). Nevertheless the scope of application of the requirement may vary from country to country. European Community legislation regarding environmental assessments is an important reference point for those countries working towards European Community membership. Thus, the European Community legislation requires developers of projects subject to environmental impact assessment requirements to submit information, along with a non-technical summary on a specific list of topics (Goldenman, 1994). Among them is a “description of the project, including physical characteristics and land use requirements during construction and operations;

main characteristics of the production processes and nature and quantity of materials used; estimate of type and quantity of expected residues and emissions from operation of the project” (Goldenman, 1994 at 65). In addition, there are requirements for disclosure of the main alternatives considered by the developer and reasons for his choice, a description of aspects of the environment likely to be affected by the project, and a description of measures to prevent, reduce or avoid significant adverse environmental effects.

The first step in an environmental impact assessment is to determine the scope of the proposed project. National laws and regulations are checked for their requirements about information to be covered in environmental impact assessments. After the scope of the project has been determined, background information is gathered from published reports, research institutes, local authorities, and other sources. Then fieldwork is undertaken to collect any missing data. This may include studies on background air quality, water resources (groundwater and surface, quality and quantity), naturally occurring fauna and flora, and local population centers.

The final step is to prepare the environmental impact report. This provides technical analysis and discussion designed to provide for a more informed decision about whether the proposed development should go forward as planned. Some jurisdictions may require environmental assessments to consider less environmentally harmful alternatives or other mitigating measures. EE legislation on environmental impact assessment frequently provides for public comment process, in order to facilitate broader

participation in environmental decision making (Smith, 1992). These comments must then be reviewed and addressed before the final environmental impact report is approved.

3.4 Risk Assessment and Risk Management

After the environmental problems have been identified, decisions should be made as to whether the problems require remedial action. Risk assessment is “an analytical method used to determine the significance of a particular threat, both its nature and its extent” (Goldenman, 1994 at 69). Risk management refers to a process of evaluating alternative actions and selecting the most appropriate response to the potential hazard.

Most risk assessments are based on health requirements (Goldenman, 1994). Their purpose is to determine whether human beings will be exposed to a condition under certain circumstances, and if so, whether they will suffer any negative health effects. Usually risk assessment consists of four phases:

1) hazard identification - the procedure of evaluation of any potential adverse health effects based on toxicological, epidemiological, or other research data (Goldenman, 1994 at 69);

2) dose-response assessment calculation of the amount of the substance and associated reactions to the amount present;

3) exposure assessment - the estimation of the “intensity, frequency, and duration of human exposures to the condition or substance (Goldenman, 1994 at 69)” based on the particular conditions of exposure; and

4) risk characterization - summary evaluation of whether, at the identified exposure levels, humans or the environment are likely to experience any adverse effects and, if so, what kind and to what extent.

Risk assessment is a helpful tool for policy makers to make more rational choices among competing interests. Once a risk is characterized, the decisionmaker can consider the nature and extent of the risk, along with political, social, economic and engineering information, in order to choose an alternative. Basically, risk assessment may provide a basis for comparing available options. It can also help to set environmental standards, and administrative and budgetary priorities.

Risk assessment and risk management are recommended for use in tandem. This paired methods used to determine whether the contamination at the site requires remedial action, what level of clean up would reduce risk to acceptable levels or, indeed, whether controls over ongoing pollution emission might be a more urgent priority. A good precedent is the experience of the United States, Germany, and the Netherlands with national cleanup programs. These and some other countries have developed risk-based criteria for screening of contaminated sites and for determining priorities for cleanup.

3.4.1 Remedial Actions

The decision to undertake remedial actions should mostly depend on the assessment of the health risks posed by the environmental problem and potential liability (Goldenman, 1994). From the point of view of the seller, it may be advantageous to clean

up on-site contamination before putting a property up for sale in order to control cleanup costs and avoid any defects of the property, which would reduce its price. On the other hand, a potential investor may require remediation of hazardous conditions identified via an environmental audit before taking title to the property. Among the factors to consider are the intended use of the property, it could be whether residential or industrial; the characterization of the risk, including its mobility; technical feasibility and costs of various remediation alternatives in comparison to reductions in risk achievable (Cummings, 1994). The past experience of western countries shows that problems of residual contamination can be difficult to address, and potentially more costly than restraining ongoing emissions.

One of the main and biggest factors influencing cleanup costs is the question of “how clean is clean”. The Netherlands has taken steps to resolve the debate by setting national cleanup standards designed to ensure that soil is clean enough for multiple uses later in time (Goldenman, 1994). The United Kingdom, on the other hand, uses a more flexible “standard of “fitness for use” and does not require contaminated sites intended for future industrial use to be cleaned up to the same level as sites destined for homes and schools” (Goldenman, 1994 at 70). In the absence of regulatory guidance by EE and CIS governments, foreign investors frequently reference strict cleanup standards, such as those of the Netherlands or Germany. Such standards may not be appropriate for EE and CIS, given the lack of state resources for environmental protection. Decisions about remedial actions will also depend on the infrastructure for cleanup available. Actual

cleanup involves reduction of the volume or toxicity or mobility of the contamination.

Based on the research of Eastern European experts, one can say that the execution can be costly (Goldenman, 1994), and can extend over years.

Pragmatic cleanup standards will enable Eastern Europe and the governments of the Commonwealth of Independent States to get more cleanups for their money. In many cases, the most cost-effective approach for pre-existing contamination may be on-site containment and subsequent monitoring. This is the approach that the German government has agreed to take in regard to the contaminated industrial sites of the new Lander of the ex-DDR (Goldenman, 1994). In general the cost of containing contamination constitute only "2 to 10% of the cost of a full-scale cleanup" (Goldenman, 1994 at 70).

3.4.2 Contracts

Another tool for resolving the uncertainties of environmental cleanup is contracts. Contractual provisions are not physical remedies for environmental problems but they can be helpful in managing the financial risks of such problems (Zechenter, 1993). They are aimed at providing written records of how the parties have agreed to allocate environmental responsibilities and related costs, as well as document environment-related disclosures. The effectiveness of contracts for risk allocation depends on the ability of each party to enforce the terms of the contract against the other. The investor will look for a stable legal structure providing a foundation of general commercial, contract and

property laws and an impartial judicial system for rendering and enforcement of judgments.

Investors seeking financial protection against a property's environmental liabilities will seek expansive indemnifications, representations and warranties, as well as a low purchase price. The privatization agency, acting as seller, will try to limit any representations, warranties, and indemnifications, as well as seek a high purchase price. The final agreement will depend on the relative negotiating strengths of the parties, their willingness to assume risk, and the seriousness of the environmental problems, as well as the potential for long term profit.

There are certain types of contractual provisions that have proven useful in managing risks in the transfer of properties with environmental problems. From the buyer's perspective, the description of assets subject to transfer should be itemized. The buyer can guard against the risk of incurring an unwanted disposal problem, such as on-site hazardous substances not necessary to the current operations, by avoiding inclusive wordings, e.g. "all property used in or connected with operation of the company" (Goldenman, 1994 at 73) etc. Contract definitions of such terms as applicable environmental law or necessary remedial actions (Goldenman, 1994) are also important to describe and thereby limit risks that will be allocated between the parties.

Pre-closing conditions play an important role also. The buyer may insist that he be allowed to carry out an environmental audit or that the seller remedy any problems identified in the course of the audit, before the title is transferred. They might want a provision ensuring access to the facility's records, plant, and employees for the purpose of

carrying out the audit (Bowman and Hunter, 1992). Often the contract will state a date by which time these activities are to be completed. The buyer sometimes asks for a provision releasing him from the agreement to purchase if any serious environmental problems are found during the audit (Goldenman, 1994). Provisions ensuring the confidentiality of the environmental audit procedure and findings may also be considered by both the seller and the buyer.

Additionally, representations and warranties are an effort by the buyer to ensure that he is getting complete information and a type of indemnification if a defect is not discovered until after ownership transfers. The seller may be asked to represent the property as being in a certain condition, and to warrant that the property is as represented. The seller usually tries to limit the representation so as to avoid making a blanket warranty about site conditions. But it is also in the seller's interest to avoid later claims that the property was misrepresented. Both objectives can be accomplished by making a comprehensive and detailed list of the property's environmental problems. Some common representations and warranties are:

- (a) that, except as disclosed, the enterprise has all necessary environmental permits and authorizations, local as well as national;
- (b) that, except as disclosed, the enterprise is in full compliance with all applicable environmental statutory and regulatory requirements, including those specified in permits;
- (c) that, except as disclosed, the seller knows of no facts or circumstances which could give rise to any future such proceedings related to environmental matters;
- (d) that, except as disclosed, no consents or approvals for transfer of the property or business are required (Goldenman, 1994 at 72).

Contracts with such provisions commonly list all environmental permits and

authorizations held by the enterprise. The buyer will want a provision ensuring the survival of the representations and warranties for as long as possible after the closing date.

Another issue to be put into the contracts is indemnification. Indemnification provides that one party will reimburse the other party for any losses suffered because of a special condition. They are similar to representations and warranties in that they specify which of the two parties assumes a particular risk. Indemnifications operate after the fact in that the indemnified party must make expenditure before the right to be reimbursed arises. Their value depends on the indemnitor's ability to pay. Investors will seek inclusive indemnifications to protect themselves from as many economic losses as possible.

Remedial actions are another item contractual parties should be aware of. Thus, contractual provisions can be used to stipulate that any environmental conditions posing an immediate threat to human health and the environment are to be cleaned up by one of the parties to the contract, perhaps before the closing date of the deal. The parties can decide in advance which party will be responsible for costs of such remediation and whether this will affect any other terms of the contract, such as purchase price.

3.4.3 Insurance

Insurance is another important method of risk management. In the context of a property transaction, investors may seek coverage against unexpected economic losses

due to environmental damage that could not be identified and allocated during the pre-acquisition due diligence procedures. Investors may also want assurance that they will be able to obtain environmental liability coverage against damage caused by the facility's operations after acquisition.

However, environmental liability insurance coverage is increasingly difficult to obtain (Goldenman, 1994). In the United States, the pollution insurance market virtually disappeared in the mid 1980s, after polluters prosecuted under the Superfund law pursued their insurers for coverage of cleanup costs under the terms of old policies (Goldenman, 1994). Meanwhile in Western Europe, most comprehensive general liability policies still provide coverage for damage from a sudden, unexpected, and unintended event, but exclusions of damage occurring from gradual pollution are now common. Coverage is usually limited to damage to a third party's person or property - excluding damage to the insurer's own property - while costs resulting from cleanups required by authorities are often not considered damage (Goldenman, 1994).

Some insurers now offer environmental impairment insurance for gradual pollution damage, but usually require the facility to undergo an environmental audit to make sure that no past pollution damage is present and that current environmental management practices are adequate (Goldenman, 1994). In France, Italy and the Netherlands, insurers have banded together to set up insurance pools to cover gradual as well as sudden pollution. A recent trend towards mandatory insurance coverage for environmental risks, e.g. Germany's 1991 legislation establishing strict liability for

certain installations (Goldenman, 1994); and the Council of Europe's draft Convention on civil liability for damage caused by dangerous for the environment activity, may stimulate the insurance market to provide more coverage for environmental risks.

Investors' difficulties in securing environmental liability coverage are even greater in Central and Eastern Europe. Outside insurers who do provide gradual pollution insurance coverage have been nervous about moving into Eastern Europe markets because of past pollution damage in the region. Local insurance coverage in Eastern Europe countries is still underdeveloped (Goldenman, 1994), though the situation is changing with the privatization of state-owned insurance companies, passing of new insurance laws and the arrival of western insurers.

3.5 Kazakhstan: case study

As stated in the article 31 of the Constitution, accepted by a Republic-wide referendum on August 30, 1995, the Republic of Kazakhstan has made its goal protecting the environment, and ensuring an environment that is amenable to public health.

In order to achieve this aim, as well as to solve severe ecological problems, the state of Kazakhstan should first of all, create modern legislation and provide for its implementation. Considering the role of law in directing social development, restoring and preserving a favorable environment as required by fundamental law is obviously senseless without legislation. The task of forming modern environmental legislation is being resolved under political, economic, legal, and social conditions that are new to the

Republic. These conditions are related to building a democratic, secular, legal, and social state in Kazakhstan: the transformation of public economic relations and the introduction of various forms of ownership; and bringing the environmental legislation of Kazakhstan closer to the advanced legislation of its nearest neighbors, Europe, and the entire world.

The Republic of Kazakhstan has been experiencing the second stage environmental legislation in the development since the moment it declared state independence, which began in 1995. The first stage was completed with the adoption of the law “On Environmental Protection” in 1991, which laid the foundation of state environmental policy, and established restrictions on economic activities having a harmful effect on the environment. It’s basic flaw, and simultaneously advantage, is the fact that in all respects this is a law of the transitional period. On the one hand, it reflects the need to create a civilized relationship between society and nature, and on the other hand relies on compromise decisions, and carries the mark of a pro-resource, objective approach to managing the quality of the environment. The rapid development of the economic reforms sped up the formation of new economic legislation (the Civil Code, and laws “On Licensing”, “On Privatization”, “On Economic Partnerships”, and others) as well as legislation regulating the use of natural resources (the Land Code and series of laws on land reform, the Subsoil and Subsoil Use Code, etc.). From an objective point of view, this created an imbalance in the level of development of environmental legislation in Kazakhstan and led to new, complex, problems. Above all, these included a complete lack of mechanisms guaranteeing environmental rights and the realization of

environmental requirements, insufficient controls regarding the use of raw materials in the economy, a lack of coordination between the functions of government agencies with respect to protecting the environment, and much more. As a result, despite a drop in production level, starting in 1991, the volume of industrial environmental pollution continues to grow. For example, high levels of atmospheric lead pollution (from three to ten times higher than acceptable concentrations) are noted in a series of industrial cities in Kazakhstan, while in Chimkent, two extreme levels of atmospheric pollution were registered – 56 and 62 times higher than acceptable concentrations (Informational Survey of the Ministry of Ecology and Bio-Resources of the Republic of Kazakhstan, 1996).

The greatest responsibility for subsequently implementing environmental legislation, maintaining a clean environment, and restoring the environment is laid upon a specially authorized state agency called the Ministry of Ecology and Bio-Resources, which was formed on the base of Ecology and Natural Resources Uses Committee in 1992. This is the main body entrusted with setting Kazakhstan's environmental policy, coordinating the environmental activity of other public and private entities and monitoring and enforcing compliance. Unfortunately, the ministry has been granted limited implementation responsibilities. In theory, the Ministry of Ecology and Bio-Resources should play an important role in the creation and development of environmental legislation, however, for years this institution was viewed as a secondary ministry for the Kazakhstani government. However, for the last ten years significant progress has been made in defining new environmental legislation and regulations. The

following laws were developed and enacted: “On Oil”, “On Land”, “On Subsoil and Its Usage”, “On Special Protected Territories”, and “On Environmental Expertise”. Further pieces of legislation such as “Conception on Environmental Protection in Kazakhstan”, the laws “On Environmental Control” and “On Recycling and Utilization of Production and Consumption Wastes” are in preparation. Nevertheless and most importantly, environmental authority and responsibility is still neither fully clear nor unanimously accepted by all sector ministries and agencies. In practice, the lack of distinction between authorities of state structures with relation to protecting the environment remains critical, and is constantly a source of conflict between state agencies, natural resources users, and citizens, as is the state’s ineffective management of environmental protection.

Collapse of the system of administrative socialism and transfer to the market economy was accompanied by the de-nationalization of the natural resources. Although land still remains the state property, it can be transferred to individuals or economic entities in the form of a lease of up to 99 years that is also a subject to inheritance (Decree having authority of Law of the President of the Republic of Kazakhstan “On Land”, 1995). Instead of one exclusive state property, many natural resource users with different forms of property were established. In this situation, a major question is the allocation of environmental liability.

It was foreign investors who first raised the issue of environmental liability during the process of property transfer in Kazakhstan. In any particular case, resolution of these issues requires negotiation between the authorized representatives of the state and

investors.

According to the article 23 of the Decree of the President of the Republic of Kazakhstan the law "On Privatization", liabilities for harm caused to the environment and public health as a result of economic activity preceding privatization should be imposed on the former owner of the privatized object - the State. Nevertheless, the distribution of such damage as well as the risks could be negotiated with the new owner.

During privatization, four variants of liability for the past contamination are possible:

- 1) liability for the past contamination is imposed on the State;
- 2) expenses for the clean up process should be divided between the State and the new owner;
- 3) liability for the past contamination should be transferred to the new owner and the price of the privatized object correspondingly adjusted;
- 4) liability for the past contamination should be transferred to the new owner, but part of the purchase price put aside to let the new owner pay the expenses of the clean up.

All four methods may look equally balanced, but applied to the local conditions, one can become more environmentally beneficial than another. I believe that the first two methods will not be favorable for the Kazakhstani environment, because they both provide for government involvement in clean up. Even my optimistic nature does not let me hope that after decades of ignoring the problems of heavily contaminated

environment, our state will wake up “green” one morning. There is a high probability that after choosing the first method, the Kazakhstani government will not fulfill their responsibility for clean up of the privatization objects, but use the money for other pressing social needs. Additionally, privatization changed the role of the state from that of owner and regulator of industry to that of regulator only. This new role is very attractive to the Kazakhstani government and gives greater freedom and incentive to regulate industry, as the state will not be responsible as an owner for any pollution or contamination. Thus, the third method could be more desirable to employ for the local government. However, the huge degree of past contamination of the privatizing objects can lead to a dramatic decrease in sale prices during privatization and reduce government’s benefits from privatization. Moreover, price reduction will work only if the value of the enterprise is greater than the measure of the past pollution damage. This may not be the case in instances of severe contamination. Thus, the fourth method will be more appropriate for both the government and investors to employ. This method of setting aside the projected costs of cleanup from the purchase price of the enterprise will allow Kazakhstan to avoid the problem of unexpectedly large cleanup bills draining national treasuries. I recommend to use the practice of time-limited escrow accounts. The government and the investor can negotiate an agreement on the kind of cleanup, which should take place and on the estimated costs of such cleanup, based on the findings and recommendations of an environmental audit. Then, the government will set up an escrow account with part of the purchase funds received for the enterprise and reimburse

the buyer for cleanup costs up to that account. The use of escrow accounts has features beneficial to both government and investors. The government can specify in the contract the conditions that must be met by the investor before the reimbursement can occur. The investor will have the assurance that money for cleanup has been deposited in a neutral place. Moreover, the combination of environmental auditing and cleanup means that a baseline between past pollution damage and any future environmental problems can be created. Unfortunately, the lack of information about the current Kazakhstani experience on employing liability methods leads to uncertainty about any predictions.

In addition to the establishment of liabilities, implementation of a strict public environmental impact assessment – when systematically applied to all sectors irrespective of ownership, is a major tool of preventive environmental enforcement in many Western economies. One of the possible difficulties on carrying out the assessment process in Kazakhstan lies in the fact that it is impossible to gather comprehensive information from local authorities and other sources. Very often such information is considered to be confidential, not because it is, but because of the bureaucratic strategy of many representatives at the state bodies. Additionally, the law does not formally require environmental audits in Kazakhstan. Therefore, audits are mostly performed at the request of a foreign investor. It is possible that an audit will be generally required as a result of cooperation between the Ministry of Ecology and Bio-Resources and the State Committee on Privatization, since it is becoming an important tool for privatization.

However, government efforts to reduce investors' concerns about responsibility

for environmental liability have been successful from the environmental perspective. They have forced both parties in privatization transactions to define and assume responsibility for contamination. By forcing the state to enact environmental protection statutes, investors did a great service for the environment of Kazakhstan and other former Soviet Union Republics. Investors provide government officials with an excuse to pass politically and publicly unpopular environmental legislation.

The subsequent solution for environmental protection requires the application of various economic measures. One of these measures – planning and financing the protection of the environment – is designed to ensure that nature protection measures are performed. Other measures, for example, payment for polluting the environment, serve as a stimulus for increasing the effectiveness of nature protection activities in terms of natural resource users.

As is well known, protecting the environment requires considerable financial means. Measures are being taken in Kazakhstan to regulate financing of environmental protection activities through legislation. The law “On Environmental Protection” establishes sources of financing for environmental programs and measures funded by the federal budget; local budgets; legal entities/nature users and citizens; and funds from nature protection funds (environmental funds), state funds for environmental insurance, preventative measures funds from insurers, and other sources.

The law also establishes special users for the funds of the republic nature protection fund: scientific research, cooperation in the introduction of resource

preservation and environmentally pure technologies, payment of compensation – according to established procedure – to citizens for harm caused to their health by pollution or other harmful effects on the environment, and the development of environment education. All these are great achievements of new Kazakhstani environmental legislation. Nevertheless, the provision on utilizing the funds for the use of privatization cleanup could significantly improve the situation.

Another area of criticism and concern is the lack of enforcement of risk assessment and risk management tools in Kazakhstani legislation. Thus, although both the law “On Environmental Assessment” and the law “On Environmental Protection” permit public participation and alternative public environmental assessments, the public assessment is informational and generates a mere recommendation. Thus, the government favors the secondary role of public assessment versus the primary and predominate status of state environmental assessment.

Contracts had become a positive practice in Kazakhstan during privatization. More and more investors prefer to have their environmental liabilities determined in the framework of contracts. This custom creates a precedent for future agreements and thus, speeds up the privatization process and at the same time does not take advantage of the environment.

As to implementation of environmental insurance in Kazakhstan, the law “On Environmental Protection” makes provision for this possibility. The practice of insuring environmental risk is not so widespread in Kazakhstan as in Eastern Europe. However,

future improvements are foreseen. Thus, the US Overseas Private Investment Corporation (OPIC), which provides risk insurance and financing for US corporations operating in countries of transition, including Kazakhstan, is about to become the first bilateral finance/insurance agency in the world to require advance public disclosure of environmental impact assessments. The procedures contained in OPIC's new draft Environmental Handbook (Science Action, 1998) are intended to insure that the environmental aspects of prospective project are no longer ignored.

Almost ten years of transition to the market economy in Kazakhstan showed that there are serious holes in the state's privatization program; in particular, Kazakhstan had no programs or agencies in place to deal with environmental issues that arose in the context of privatization transactions. The Kazakhstani administrative law system was not capable of handling environmental issues that arose in connection with the privatization process. Originally the Kazakhstani government did not anticipate that environmental issues would slow the overall progress of privatization. There were at least two reasons for the government's failure. First, at the beginning of the privatization process, political, economic and social pressures forced the government to create a system of completing sales transactions as quickly as possible, without taking into consideration any obstacles, such as environmental issues. Second, the government initially viewed environmental issues as last minute thoughts, used by investors to manipulate purchase prices. The government did not understand that environmental concerns were a necessary element for determination of property value and, therefore, essential to investors.

IV. RECOMMENDATIONS

Examples of privatization in Eastern Europe and the Commonwealth of Independent States countries demonstrate a tension between the objectives of environmental regulation and privatization. From one side there is governmental pressure to complete privatization as soon possible, increase the state revenue and enjoy the advantages of a free market. But from another side there are severe environmental problems that have to be assessed and audited, along with liabilities that have yet to be determined. Thus, environmental regulations require a great amount of time to develop. In order to resolve this tension, the government of Kazakhstan should consider the following recommendations. First, the government must accept that environmental reforms are just as essential to the long-term success of its nation as are economic achievements. Inevitably, governments have to accept slower growth as a consequence of implementing environmental reforms. Vital to this understanding is recognition that environmental improvements and certainty are necessary to attract foreign investors experienced in issues of environmental liability and crucial to the success of privatization. Without an accommodation of environmental reforms, environmental goals will be sacrificed and the transition to market economies will be slowed. Second, Kazakhstan must establish comprehensive environmental policies and enforcement frameworks to give order and uniformity to environmental issues arising in the context of privatization transactions. The absence of an ordered and established policy forces investors and government officials to expend unnecessary resources negotiating each and every

environmental issue instead of relying on established precedent and legal principles such as liability parameters and site assessment requirements. These negotiations slow down the speed of privatization. The case-by-case determinations also make it difficult for future investors to learn how the system operates. Third, the Kazakhstani government must recognize that privatization should not be the only means for addressing environmental protection concerns.

One of the fundamental drawbacks of the generation of environmental legislation of 1991-1996, as mentioned in previous chapters, was the lack of a mechanism by which subjects could exercise its principles and authorities, which led to the largely decorative and ineffective Kazakhstani environmental legislation. There is a need to correctly establish the legal mosaic and constitute such a mechanism, which would include all areas and methods of legal regulation, and serve as a guarantee of environmental legislation by means of increasing preventive measures. During the development and revision of Kazakhstani legislation, environmental policy should be valued as **equal** with government policy in other areas. All of the legislative branches should include norms and provisions on environmental protection and cautious usage of the environment. Therefore, it is necessary to establish rights and liabilities of the local representative and executive bodies and their correspondent authorities. The liabilities for past contamination should be allocated as it is described in section 3.5, when the liability will be transferred to the new owner, but part of the purchase price put apart to allow the new owner compensation for clean up expenses incurred.

In general, the current environmental legislation requires the following changes:

- 1) creation of clear definition and distribution of the authorities and liabilities between different bodies of environmental protection activity;
- 2) classification of current standards and norms on environmental protection;
- 3) changing the status of environmental audit from optional to obligatory;
- 4) development of the legal act that will regulate the procedure of arranging the environmental assessment and audit. In addition to the present law "On Environmental Audit" this document should include a time table for carrying out an adequate environmental audit and a detailed description of requirements for the technical reports;
- 5) consolidation of the requirement that state bodies provide periodic reports on environmental quality and that the firms and companies carrying out economic activity inform the authorized environmental protection body on environmental protection issues;
- 6) consolidation of the public right to access the information regarding the natural environment and determination of a few limitations concerning industrial and commercial secrets and national security.

Under the conditions of transition toward a market economy: economic de-stabilization, destruction of local industry and lack of local investment in Kazakhstan, it is very important to avoid the further degradation of the environment. It is vital to define the main priorities of the state policy, which should provide environmental protection and security. In addition, one of the main priorities should become the transition from a

“disclosure and liquidate’ principle to a “predict and avoid” principle. In a majority of cases environmental impact remediation costs much more than its prediction and avoidance.

In order to arrange an independent environmental audit and assessment the Kazakhstani legislation should provide norms and regulations that will avoid any subordination of environmental protection agencies to the local representative bodies or any dependence on them. Nevertheless, the strategy and activity potential of the environmental protection agencies and bodies should be based not only on its infrastructure, but also supported by the activity of other state bodies. In the future it is necessary that other state agencies will themselves include some environmental protection activity in their business plans. It is also strongly recommended that the Ministry of Ecology and Bio-Resources participate in all privatization discussions, and review all major contracts for their environmental aspects. It is also suggested that the Ministry of Ecology and Bio-Resources have a “veto” power in case privatization projects do not meet the environmental protection requirements. This veto power could become a powerful tool to ensure the work of an environmental protection control mechanism during privatization.

To promote environmentally friendly behavior the Kazakhstani government should take into account both the policy of incentives and sanctions. It will probably take a great amount of time and financial commitment to provide the control system for the correct implementation of sanctions systems. Additionally, the unstable situation in the economic and the social systems of the country do not allow the mechanism of economic

incentives to work effectively. During the transition phase, due to the crisis in the economy, the government of Kazakhstan was not able to provide salary and pension payments to millions of Kazakhstani citizens. Some of them still did not get their last annual payment (Caravan, 1998). In this situation the employment of sanctions in a form of increased fees for use of natural resources will not work. To the contrary, it will worsen the situation and may lead to more conflicts between the public and government. Nevertheless, this method should still remain on the government agenda for long-term development. Once market reforms have been fully completed, environmental and pollution charges will have to be deducted from the profit of enterprises (Tisdell, 1997). As to the incentive method, it is necessary to develop and gradually introduce the scheme of volunteer inspections and environmental labeling of the industrial and agricultural production sector as a guarantee of the high environmental quality of their products. It is essential to create favorable conditions for the activity of the organizations whose focus is environmental protection. The legal support to such entities should be supplementary to financial incentives, such as governmental privileged loans and credits. Also, it should intend to encourage the direct foreign investment in production of environmentally clean products and services. Thus, it is highly recommended to include in the Tax Code and the "Law on Foreign Investments" provisions that will encourage the usage of environmentally friendly technologies and services.

Along with the aforementioned recommendations, the low efficiency of nature protection activities in Kazakhstan is related to the lack of professional environmental training among the directors and specialists of both state agencies and enterprises. In

order to correct this situation, legislation must establish requirements stating that officials and specialists connected with activities that negatively affect the environment must have the necessary environmental training and knowledge of the fundamentals of environmental legislation.

For the past seventy years, environmental decision making in Kazakhstan was a secretive process conducted behind closed doors, without the consultation of environmental experts or the public. The ongoing democratization process allows for public access to information and effective involvement in the decision making process. The adoption of such a process will help avoid the unintelligible, politically or economically motivated decisions of the past seventy years and, thus, reduce the risk of harming the Kazakhstani environment. In addition, greater public participation should be required by law during preparation of the environmental impact assessment process through extensive consultation and the publication of evaluation results in widely circulated media. Public participation would help to identify the range of impacts of a proposal, evaluate the significance of impacts, provide comments on the fairness and completeness of draft impact statements and monitor the effects of the proposed project (Westman, 1985) as well as highlight the need for further remediation measures. Although all these activities will slow down approval of the project, the final result will be worthy.

Many things should be done in Kazakhstan to promote environmental protection and compliance of economic activities with environmental legislation. Not everything is affordable for Kazakhstani government at the present stage of the transition. However,

there are some practical recommendations that are possible to implement right now, without delaying for “better times”. The most effective and least costly method of ensuring compliance is to use self-implementing enforcement provisions. First, the law “On Environmental Protection” has to require all private companies to periodically perform and submit to the environmental agency or state authorized body a public environmental audit. Each company would be required to “certify”, i.e., swear under penalty of perjury, that the company is in compliance with the ecological statutes and regulations or that the plant is not in compliance. The public environmental audit would verify whether the company was actually in compliance. It is suggested that initially, the public audits be required no more frequently than once every five years. This frequency will suffice for a pilot project. Second, as the name implies, the public environmental audit would not only be given to the government, but would be provided to the public, except those portions that discuss trade secrets of the industrial facility. Third, private environmental consulting companies should be authorized by law to perform public environmental audits. These private environmental consultants would be hired directly by private companies who operate the industrial facilities. Fourth, these consultants would be required to meet certain standards of professional competence and be licensed and approved by the Ministry of Ecology and Bio-Resources. An ethical code could also be promulgated defining the duty of the consultant to provide faithful reports. Failure to do so would result in revocation of the consultant’s license. Fifth, enforcement could occur at several levels under this system. The private industrial facility has an incentive to provide accurate information because false reporting violations are typically considered

more severe and are easier to prove. Since an independent consultant is involved it is more difficult to falsify the report. Also, a government can strictly regulate the technical competence and ethics of the private environmental consultants. Since these companies will be fewer in number than industrial facilities, the government could perform this function with fewer personnel. The government could also rely on certifications of the European Union. The government can review the public environmental audits and select those that reveal the most serious environmental problems or those that are inconsistent with what is known about the particular industry. The government could perform periodic governmental environmental audits using its own personnel or private environmental consultants under contract of the government. Sixth, the key issue is what the government will do with the results of a public environmental audit that shows noncompliance. The first public environmental audit should probably not trigger penalties or a finding of violation. Rather, the obligation should be placed on the private industrial facility and its consultant to propose a schedule to achieve compliance. In the case of a failure to meet compliance, harsh penalties should then be imposed.

In addition to public audits, the government should encourage private entities to conduct their own private audits. These private audits are useful to enhance compliance by the private entity. The private audits will help companies identify where they may have compliance concerns and how they can correct potential problems. These audits may also reduce the magnitude and costs of the public audits and save the private entities money. As public audits will be conducted every five years, it is recommended that private audits be conducted every one or two years. Private audits can be confidential or

not, depending on the decision of the private entity.

Although environmental protection requirements are costly, a lack of such requirements could be even more costly for Kazakhstan. Environmental requirements are not incompatible with development. Indeed, environmental requirements can be developed, implemented, funded and enforced as part of the privatization process, providing incentives for investment, and encouraging development. To improve the environmental protection situation the government of Kazakhstan should concentrate on the implementation of all above recommendations, but mostly on the precautionary principle. This would ensure the avoidance of environmental problems by means of prior planning and strengthening government administration of environmental controls.

GLOSSARY

Due diligence. The amount of attention or diligence to the matter at hand that is reasonably required under the circumstances.

Environmental audit. A “due diligence” review to determine the nature and extent of contamination or other environmental damage on property.

Environmental assessment. An analysis of the future impact on the environment if the proposed project is carried out.

Escrow accounts. Accounts where money is temporarily deposited with a neutral third agent under the terms of a contractual agreement made between two parties. The escrow agent holds the funds until the conditions specified in the contract are met, at which time the funds are turned over to the party entitled to the money.

Indemnification. Contractual agreement by one party to compensate for a loss or damage another has incurred or may incur. It can be used to shift an economic loss to the party chiefly responsible for the loss, rather than to the party who may have legal or contractual responsibility.

Liability. An obligation to do or to refrain from doing something, or to account for certain acts.

Remediation. Actions, such as containment or cleanup, undertaken to reduce hazards from residual pollution.

Risk assessment. An analytical method used to determine the significance of a particular hazard, including its nature and extent, and the probability that a damage or injury might occur from the hazard.

Risk management. The process of evaluating alternative actions and selecting the most appropriate response to a potential hazard; can also refer to measures taken to control the probability of a loss or to minimize the damage that could occur from a particular danger or peril.

Transition economy countries. Countries that are presently moving from economies that lack market economy characteristics and substantially subsidize industries to the economic models employed in the developed countries.

Vouchers. A coupon, form or other document indicating that its owner may apply the value specified on the voucher against future purchases of some item, such as shares in former state-owned enterprises.

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