

Administrative decentralization in post communist countries: The case of water management in Ukraine

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Abstract

Ukraine, along with the majority of the other post-Soviet countries, has been facing severe problems concerning water supply and quality. Transition from an authoritarian to a democratic state brought with it the hope of building a new decentralized system of water resource management. The analysis demonstrates that the contradiction between political decentralization in terms of its stated objectives and the heavily centralized decision-making process in terms of policy implementation contributes to the slow progress in improving water quality. The use of enforcement and assistance tools can prove to be valuable for the development of a sustainable system.

Introduction

The third wave of democratization has demonstrated that the countries which began their transition after the fall of the Berlin Wall in 1989 had to face a number of challenges, primarily of a political and economic nature. This article addresses the issue of environmental reform in Ukraine as it has developed after Ukrainian independence from the Soviet Union in 1991. More specifically, this paper analyzes the current system of water resource management with special emphasis on the legal framework, the process of policy implementation, the tools used in this process, and possible approaches to improving the water management system.

The key questions addressed in this article are the following: has the transition to democracy in Ukraine brought a fundamental change in the government's environmental management (compared to the communist practice of systematically covering up all problems), thus making it more responsive to citizen's concerns, transparent in its decision making, and more efficient in addressing pressing environmental issues? And if so, have governmental policies demonstrated any positive results after over twenty years of transition?

This paper argues that Ukraine, like many other developing democracies, has been seeking decentralization of its water management system in an attempt to address environmental challenges and make the water management system more responsive to citizen's concerns, transparent in its decision-making process, and capable of addressing pressing environmental issues effectively. The idea behind decentralization policies has been to give more discretion to local government and to increase usage of the resources of local communities to counteract the results of environmental degradation. In addition, more responsibility has been placed on large industrial enterprises and factories which are directly responsible for water and air pollution.

The paper is organized as follows: the next section sets out an analytical framework that guides our case study analysis. The case study analysis is presented, which discusses the main environmental challenges and the response of the Ukrainian government to these challenges. In addition, the section presents the role of international factors in addressing the identified challenges. The case study analysis points to both policy instruments and the policy implementation process as key factors in understanding and dealing with the challenges. Said policy instruments and the policy implementation process are addressed in the next section. The paper concludes with a discussion of our findings.

Analytical Framework

A democratic state must not only be based on democratic principles but also be democratically administered (Levitan, 1943). The public administration systems of developing democracies need to go through the process of organizational change in order to develop a new system of public administration that allows for a certain level of decentralization. D. Mazmanian and J. Nienaber (1979) suggest four factors as indicators of organizational change, namely: (1) changes in organizational objectives; (2) changes in internal structure; (3) changes in output or performance; and (4) changes in the decision-making process.

The expectation is that decentralization will bring the decision-making power to local levels of governments, which have first-hand experience with the issue. Further, decentralizations are expected to raise responsiveness of local

authorities to the needs of the public. Finally, administrative agencies need to be both active in policy implementation and responsive to the public interest (Denhardt, 1995).

Public administration systems in developing democracies have to deal with the competing influences of old authoritarian legacies and new democratic developments. For example, the old Soviet system was characterized by extreme centralization, with pervasive hierarchical controls over the lower levels of administration (Hesse, 1993). Administrative agencies at the national level of government had an exclusive power in decision making and little, if any, space was left for local initiative. Almost no criticism of the central authorities was allowed. Unlike the Soviet system, a democratic state assumes a considerable degree of autonomy for the local level of governments in the decision-making process, including the financial aspects of policy making.

Building a system that allows for larger local government discretion requires a new system of oversight. The literature argues that oversight can be achieved through either what literature calls "police patrols" or "fire alarms" approaches (McCubbins and Schwarz, 1984). The literature further points out that supervision and alarms approaches to oversight are linked to two main approaches of ensuring compliance: enforcement and assistance (Breton and Salmon, 2009). Lack of compliance can be the result of deliberate actions of local authorities aimed at premeditated underperformance. In addition, lack of compliance can result from a lack of money, expertise or resources. In this case, assistance in form of cash payments and other support may be effective in ensuring compliance (Breton and Salmon, 2009).

The system can be most effective when it encourages compliance and mitigates against the deliberate and purposeful uncooperative attitude of local authorities. The literature discusses the distinction between enforcement and assistance, and sometimes formulates this as the difference between deterrence and cooperation (Rechtschaffen and Markell, 2003). Others argue that the drawback of replacing term "enforcement" with "deterrence" is that it denies the fact that assistance can be a tool capable of achieving deterrence. Indeed, assistance can make those who benefit from it dependent on its continuation (Breton and Salmon, 2009).

The system that transitions from a highly centralized to a more decentralized policy system is likely to experience challenges in adding compliance tools to the traditional enforcement instruments of an old system. It is likely to be very tempting to the system to continue with the old enforcement instruments. Assistance, however, is likely to prove to be a challenge because governmental systems of a Soviet type have been relying on enforcement for a long time. In addition, the Soviet system was built on the assumption that a government can account for all contingencies through using what the system called "scientific communism," and therefore, any lack of compliance is a result of deliberate contempt rather than factors that have not been accounted for in the early planning stage. The political culture of belief in an infallible, wise, and all-knowing government died with the fall of the Soviet system. However, changing the policy creation and implementation process and introducing new policy tools that are more in line with a decentralized democratic system are likely to prove to be a challenge.

The analytical framework of public entrepreneurship offers one of the most useful approaches to dealing with these challenges (Ostrom, 2006). According to this approach, public entrepreneurs are motivated by diverse interests, including improving services to their own communities, sharing the burden for increasing benefits, the stimulus of innovation, the respect they receive from others, and, for those who are not entirely volunteer workers, the income they derive from their positions in public service (Mintrom, 2000; Kuhnert, 2001). Studies repeatedly show that communities of individuals in urban and rural areas have self-organized to provide and co-produce surprisingly good local services given the constraints they face (McGinnis, 1999; Ostrom, Gardner, and Walker, 1994; Gibson, McKean, and Ostrom, 2000). Therefore, "citizen enforcement" has been identified as an effective tool in ensuring compliance (Breton and Salmon, 2009). This level of local involvement requires citizens to have access to information. International organizations can be very effective in providing technical assistance and disseminating information.

The following section provides a discussion of the issues concerning Ukrainian water management and the governmental response to these issues. This section analyzes changes in organizational objectives and develops a foundation for an analysis of the changes in internal structure and performance of the main governmental authorities concerning water management.

Governmental Response to Environmental Issues in Water Management

Ukrainian Independence and the Environment

Ukraine started its democratic transition from a national movement where environmental concerns that arose after the Chernobyl catastrophe of 1986 served as a consolidation ground for all those who opposed the Communist regime and domination from Moscow in general (Wise and Pigenko, 1999). The aftermath of that environmental disaster has

extended far beyond strictly environmental issues, to a complex web of socioeconomic, political, medical, biological, psychological, ethical, ideological and cultural problems. The historical pattern of unsustainable development laid bare by the disaster underpinned independent Ukraine's decision to include an environmental policy as a fundamental part of its national policy (UNDP Ukraine Report, 2007).

Under the Soviet regime, the environment suffered so that economic interests could be promoted; nature and natural resources were used in an unwise and exhaustive manner to fuel the economic needs of the Soviet Union. Ukraine provided 70% of the raw materials utilized by the Soviet Union. This heavy use of natural resources occasioned policies that lacked interest in sustainable environmental development, and the result has been devastating for the environment. For example, forested areas, which occupied 45% of the Ukraine at the beginning of the 20th century, now occupy approximately 14.3% of the land. Among other things, such deforestation leads to the depletion of water resources.

The economic decline after the collapse of the Soviet Union was accompanied by an increase in volume in the nonproductive sphere of the GDP, mostly through an increase of exports and a decrease of the man-made burden on the environment. However, as a result of capital drain from the country and the relatively minor volume of foreign investments (about 84 USD per capita during 1989-2001), general capital investments decreased, and machinery and production facilities deteriorated, including over 50% of those in the environmental sphere.

Water is vital to the survival of all ecosystems. In turn, ecosystems help regulate the quantity and quality of water necessary for the survival of all species. Policies that ensure water quality are critical for numerous reasons, including the need to protect aquatic biodiversity and drinking water sources. Ukraine is considered to be one of the most environmentally degraded countries of the former Soviet Union, with 70% of its population living in environmentally dangerous areas. According to the Environmental Performance Index, in 2010, Ukraine occupies 87th place out of 163 countries (Yale Center for Environmental Law and Policy, 2010).

The contamination of the water supply is especially serious because Ukraine has limited sources of fresh water. The average amount of fresh water available per capita is well below the average levels available in the majority of the countries of the former Soviet Union. The most important source of water is the Dnipro River, which drains some 60% of the surface area of Ukraine and provides drinking water to 70% of the population. Nearly 20 billion cubic meters of untreated effluent is dumped into the Dnipro each year. This represents over a third of the annual flow-through of some 52 billion cubic meters (Guilmette, 1998). According to the Ministry for Ecology and Natural Resource of Ukraine (MENRU), despite governmental programs directed at water quality of Dnipro, the situation has not improved (Brief, MENRU, 2007, Інформаційна довідка).

Overall, the water resources of Ukraine have suffered from considerable anthropogenic pressure during the Soviet era and are severely degraded. Ukrainian independence did not provide the anticipated environmental relief, and in many instances the environmental situation in the country has only worsened due to almost uncontrolled activities of large industrial enterprises and factories.

For example, the almost uncontrolled industrial activities of AzovSteel and Illich factory in Mariupol, Eastern Ukraine, have brought the city to the level of the second-worst polluted city in the nation. The water quality in the region is such that the medical authorities and the city council strongly encourage the population not to drink or even brush their teeth with municipally-provided water unless it is boiled and/or filtered (Priazovskiy Rabochiy, May 24, 2009).

Drinking water quality is a significant environmental health problem in the country. The problem exists both in urban and in rural areas. About 75% of the water available to the population is supplied by surface water, and most of it is not fit for drinking. In towns, the main drinking water problems are the low quality of the water, the limited water supply, and the rapid increase of tariffs. In rural areas, where wells provide a more substantial source of water, the problems include water shortages and contamination of drinking water sources with chemicals such as manganese, iron, hydrogen sulfide and nitrates. There is also extensive leakage into the underground pipes of chemicals from stockpiles of pesticides. There is an increase in diseases such as hepatitis, ontological diseases, allergies, skin diseases, endocrine dysfunction, cholera, and "blue baby" syndrome.

Non-governmental organization MAMA-86 estimates that 45% of the population is consuming water that does not comply with government standards set in 1980 (Khosla, 2002). According to public opinion polls in 1994 and 1995, 73.5% of the interviewees felt a lack of environmental security. 80.9% of interviewees in 1994 and 75.5% in 1995 said that the environmental situation in Ukraine was only getting worse during those years.

Some regions, such as Volyn, report a decline in water quality. In 2009, out of 444 samples taken from rivers and lakes, 29 samples (6.5%) had excessive amounts of pesticide. In 2008 the contaminated samples comprised only 5%. But some other water quality indicators improved. In 2009, 7.0% of samples did not comply with regulations for

microbiological contaminants, compared to 11.3% of samples in 2008. However, even the lowest of these remains far above generally accepted safety limits. 8.9% of all drinking water samples taken in the Volyn region during 2009 did not, for one reason or another, comply with governmental standards for drinking water (Regional Report, Volyn Region, 2009).

Other regions, such as Crimea, have also experienced a considerable decline in their water quality. The amount of waste water discharged in Crimea in 2009 increased from the 2008 total by 8.28 million cubic meters. 70.75 million cubic meters of contaminated water were discharged into the surface water of Crimea in 2009.

The severity of environmental issues in Ukraine has increased since 1991. The resulting negative impacts on the environment continue to be a cause of concern among scientists and the general public, leading to development of nature conservation activities (Nazarov, Cook, and Woodgate, 2001). The environmental situation demonstrates that the ecological problems are caused by two main factors: unwise and irresponsible usage of natural resources -- which decreases the productivity of the biosphere, and pollution -- which threatens all forms of life, first of all human life and health (Shevchuk, 1994). Therefore, environmental concerns will remain on a long-term agenda for all political forces that struggle for power and influence in Ukraine.

Governmental Response

The Government has responded to these environmental challenges on many different levels. It has stated its environmental objectives clearly, and prioritized issues in water management. The environmental legislation of post-Soviet Ukraine includes over 200 laws and by-laws (normative acts of the Cabinet of Ministers). The adoption of the New Constitution of Ukraine on June 28, 1996 was among the first and most significant steps in this process. The Constitution proclaimed it the responsibility of the State to ensure ecological safety and to maintain ecological stability and equilibrium in Ukraine (Article 16), confirmed the right of free and unrestricted access to information on environmental issues (Article 50), and assigned the responsibility to all citizens to cause no harm to nature and to compensate for any harm caused by their actions (Article 66). The government also adopted the Law of Ukraine "On the Protection of the Environment" in 1991. Governmental agencies developed administrative codes and regulations based on these laws, such as the Land Code (1992), the Forest Code (1994), the Water Code (1995) and the Mineral Resources Code (1994).

The Law of Ukraine "On Amendments and Additions to Certain Legislative Acts on Natural Environment Protection," adopted on March 6 1996, significantly increased the powers of the main governmental agency entrusted with the task of environmental management, the MENRU. This law also outlined the basics of the distribution of power among the different levels of government, and initiated the process of change in the Ukrainian public administration system from a highly centralized Soviet-type administrative system to a more decentralized administrative system where local governments are entrusted with some responsibilities as well.

In particular, the duties of the MENRU have been to guide and control the preservation of biological diversity and natural ecosystems, and to define the government strategy and legal aspects of the use and conservation of natural resources. According to Art. 20 of the Law of Ukraine "On the Protection of the Natural Environment," MENRU is authorized to conduct state control of the use and protection of land, mineral resources, surface and ground waters, atmospheric air, forests and other types of vegetation, animal wildlife, the marine environment, and the natural resources of territorial waters, continental and maritime zones of the country. Ecological safety is also within its purview.

In addition, MENRU has its departments operating at both the regional and local levels. Each of the managerial departments at local level consists of departments and sectors responsible for particular parts of environment protection and natural resources consumption, such as water or forestry.

From the mid-1990s and until now, the idea of fiscal decentralization continues to be a very popular one, and regularly becomes the political slogan of virtually every party during parliamentary elections. Initially, decentralization had been intended as a solution for many local problems, including the environmental situation in Ukraine. The government reasoned that allowing local governments some discretion in spending some part of the collected funds from fees and fines would increase efficiency in protecting natural resources. In the Soviet system, all fines ended up in the budget of the ministry at the national level. However, in the new system, when MENRU levies fines on subjects for violating rules and regulations, a part of these are to be returned to local authorities. This also implies a transfer of some of the management functions from the national to the local level of government. However, one of the major complaints from the local authorities is that those funds never find their way back to the communities.

According to MENRU, current conditions do not promote consistency for implementation of the environmental policy in the country. Therefore, the purposeful coordination and monitoring of the implementation of recommendations

reflected in the EPR of Ukraine have not been always accomplished on a sufficient level. However, it should be noted that Ukraine still strengthened its environmental legislation, regulations and management. The great majority of the original environmental recommendations are being carried out; only a few of them are still on the agenda at this moment (Ministry of Environmental Protection of Ukraine, 2004).

This discussion demonstrates that the Ukrainian government recognized the environmental challenges and initiated changes in its organizational objectives and the internal structure of the environmental management system. In addition, the government made changes to the organizational structure of MENRU and its fiscal practices in order to redistribute funds collected as fees and fines. However, sustainable environmental development remains an objective that is hard to reach. Moreover, the environmental degradation of water resources persists despite steps that the government has taken to counteract existing problems. Therefore, the question remains: what factors contribute to this development? In the following section, we provide an analysis of policy instruments. A closer look at the specifics of policy implementation process can provide a valuable insight into the issue.

Policy Instruments

The Soviet state was characterized by its extreme centralization, with hierarchical controls over the lower levels of administration (Hesse, 1993). The national administrative agencies had exclusive decision-making powers and were a subject to control by the Communist party. This practice did not leave much space for local initiatives. One of the basic goals of the Communist regime was a constant increase in the volume of industrial production with little if any concern for environmental consequences. This ineffective economic system could achieve this goal only at the expense of an increase in the consumption of natural resources, without concern for sustainable development (Kotov and Nikitina, 1993).

Thus, the environmental management of the Soviet state had a clear top-down hierarchical structure of subordination among the different departments responsible for environmental management. During the communist regime, national, regional, and local Departments of State Management developed regulations on the basis of general rules which had been developed by a central branch of the MENRU. Initiative, although formally allowed, hardly existed in practice because regional and local administrators might have been considered a threat to the regime and "official party line."

The government of independent Ukraine introduced changes to the system in an attempt to decentralize the natural resource management system. The president of Ukraine issued the Decree "About measures for the management of works on improvement of environment of river Dnipro and quality of drinking water" in 1992. The MENRU responded with administrative order 43 (1993), ordering implementation of the State Programs "Dnipro" and "Polissya", which required the active participation of local governments. Regional and local Departments of State Management presented their proposals, and most of those proposals were incorporated in the final Program documents.

Despite clearly-stated objectives to decentralize, the Ukrainian policy instruments still had their origins in the Soviet environmental policy of the late 1980s. Among the main policy instruments which continue to be used in Ukraine are:

- 1) Permits, compliance, environmental norms, and standards;
- 2) Pollution fees and environmental funds; and
- 3) Environmental review.

Permits, compliance, and environmental norms

Permitting is the key regulatory tool available to MENRU. On January 3, 1990, the President issued a decree On Establishing Rules on Issuing Fines and Mechanisms of Their Collection. This document addressed the process of issuing permits concerning pollution (which is the main instrument in regulating water pollution in Ukraine), payments for buying a permit, fines for non-compliance with the conditions of a permit, and mechanisms for collecting fines. It has also defined the way collected resources must be distributed between local, regional and state governments. The document was further amended on August 9, 1999 with a new instruction on issuing and collecting payments and fines.

MENRU issues each factory or production facility a permit which defines the kind and amount of pollutants it may release, a timetable by which it must comply with MENRU requirements, and background materials. Once issued, the permit is usually good for five years. Similar to permitting systems elsewhere, the Ukrainian permitting system is technically and administratively complex. The key concepts in the permitting process are the maximum permissible concentration of pollutants (MPC), the sanitary protection zone (SPZ), and the limit established for each enterprise's release of pollutants.

The maximum permissible concentration is the ambient norm set for a given pollutant. Each MPC is set by the health ministry at a level that, at least in theory, poses zero risk to human health. If there is no MPC for a substance, then a

temporary MPC is set, pending further research, which is usually funded by the polluting enterprises. MPCs, once established, are rarely revised. (By contrast, US standards are generally revised every three to five years.)

MENRU (primarily at its local offices) sets limits on the emission source for each pollutant released into the environment. For water these limits are called maximum permissible discharges (MPDs). The limit represents the level of release at which the MPC will be attained at the perimeter of the sanitary zone. MENRU establishes limits for one year and must communicate these limits to the source by January 1 of each year. MENRU can also set temporary limits that apply until the source of the emissions attains MPC or MPD limitations.

The norms and permitting system have not been very effective in Ukraine, for several reasons. First, Ukraine tries to regulate a very large number of MPCs, far more than most other countries do. There are more than 1,000 MPCs for surface water: over 500 standard permanent MPCs and another 500 involving temporary MPCs. The demands on MENRU staff are quite high, and staff review of permits and limits is reportedly often perfunctory. Second, compliance with these rules is very difficult because the rules are complicated and often contradictory. Thus, violating the rules may be easier and more efficient financially than following them. An uncoordinated system of financial management does not allow for effective usage of monetary resources. Third, MENRU lacks the equipment and instruments to carry out effective measurement and monitoring of pollution releases. Most enterprises report their own pollution, which is not unusual, and MENRU lacks the means to check the figures they report. Finally, enforcement is rather weak and not systematic. The penalties for violations are often low and therefore meaningless. The government struggles with the issue of rising unemployment, and therefore collecting fines that may bankrupt big enterprises and factories can be political suicide both for local city councils and politicians from these regions who work on the national level.

Pollution fees and environmental funds

MENRU has been working on developing its own financial mechanisms, utilizing the nature protection funds from state and local budgets and creating extra-budgetary nature protection funds. These mechanisms are usually referred to in Ukraine as "market-based" instruments, as opposed to the "command-and-control" approach, because they are supposed to provide a financial incentive for polluters to reduce pollution. In the absence of a free market and a mature regulatory system in Ukraine, however, the distinction tends to be lost, and there is not much evidence that polluters regard pollution fees as anything but another tax or fine they must pay.

Pollution fees have been introduced in Ukraine in stages. In 1989-1990 they were introduced on an experimental basis in six different regions; similar experiments were going on in many other parts of the USSR at the same time. In 1991, Article 44 of the Ukrainian environmental law mandated the use of pollution charges throughout all of Ukraine, and a later decree established the procedures for levying and collecting the fees. In practice, the full system has been in place in Ukraine for several years.

In this system, polluters (including mobile and non-point sources) must pay for their pollution of the air, land and water (surface, marine, or ground), usually per ton of pollutant released. Payments are made quarterly in advance, and adjustments for actual pollution are made at the year's end, based on the enterprises' annual reports of pollution releases. Companies dealing in hard currency must make pollution payments in hard currency. Pollution payments do not exempt polluters from reimbursing the state for the actual damages caused to the environment.

In 1996-1997 MENRU prepared and presented to the Cabinet of Ministers a number of documents intended to develop and extend ecological-economic reform in Ukraine. In particular, it established a new system of permanent payment standards for the special use of water resources (01/01/97). This system replaced the old system of temporary standards. In addition, the MENRU issued an order which approved basic payment standards for environment contamination, incorporated under a Ministry of Justice decision.

Any pollution in excess of the MPC at the perimeter of the sanitary-protection zone triggers a variety of enforcement procedures. The MPD limit is also a key element in the pollution fee system. These limits, it should be emphasized, are often established, not by actual measurements of pollution effects, but by simple back-calculation from the MPC. It is assumed that the pollution is predictable according to mathematical formulas. A sanitary-protection zone (SPZ) is the area around a pollution source, usually no more than one kilometer beyond its boundary, in which no people can live, so as to protect the health of the population.

If it is expected that the MPC will be exceeded at the perimeter of the SPZ, in theory the pollution source cannot be built, and an exception must be sought. If the MPC will not be exceeded, the size of the SPZ may be reduced, with the agreement of MENRU and the health ministry.

For any pollution source, oblast (regional) governments establish the amount of the fee based on four main factors. First are the limits the MENRU sets for each pollutant in the permit. Up to the limit, the normative payment applies

and is treated as a production cost. Beyond the limit, payments are increased by a factor of up to five and taken out of profits. Second, the more toxic the pollutant, the higher is the fee. A substance such as mercury, for example, is likely to be 100 times more expensive than a relatively benign substance. Third, the more polluted the region where the polluter is located, the higher the fee. The charge may be raised by a factor of as much as 1.75 for a badly polluted region. Fourth, if a source does not have duly confirmed limits, it is assessed above-limit payments.

All this makes the current Ukrainian pollution fee system somewhat lenient toward polluters. For example, local governments may partially or fully exempt failing and bankrupt enterprises from payment of the pollution fee. In addition, as a temporary measure prompted by an economic crisis, all polluters were exempt from fees until January 1, 1996, for pollution within the limits of their MPEs and MPDs.

On November 5, 1997, MENRU introduced another mechanism to improve environmental management, the system of financial rewards for environmental enforcement personnel who discovered and took necessary steps to prosecute polluters. The document specified that funds for these rewards are established from the fines collected from polluters.

Resources from pollution fees are deposited in a system of environmental funds specially earmarked for environment purposes. Article 46 of the 1991 Environmental Law provides that 70% of the money goes into local environmental funds, 20% into oblast environmental funds, and 10% into the Ukrainian national environmental budget. The cities of Kyiv and Sevastopol, which enjoy special status, retain 90% of the money collected. These funds do not constitute part of the regular governmental budgets at any level.

However, with the state owning a large portion of the factories and enterprises, collecting these funds becomes a challenge. The government is faced with the dilemma of either making politically unpopular decisions by applying rather harsh economic measures, or building political capital by allowing multiple exceptions to the existing rules. Budget deficits and the many social issues that the country faced after independence led to a largely unbalanced system where objectives concerning environmental protection were stated and structures were in place, but enforcing the rules presented a difficult political challenge to the government of Ukraine.

According to the parliamentary newspaper *Voice of Ukraine*, "It is very often forgotten that the payments and fees for environmental pollution should go directly to the municipal and village councils, where as oblast and rayon authorities are entitled only a part of payments for the usage of natural resources" (*Voice of Ukraine*, 14 December 1993).

Environmental review

In Ukraine, as in the majority of former Soviet republics, there is a two-step review process that is mandatory for all projects and activities that can have an adverse impact on human health and the environment. The first step in this process is an environmental impact statement (EIS), which the project proponent prepares. The second step is an official state environmental review of the EIS, usually carried out by a panel of experts either from MENRU or designated by MENRU and working under MENRU supervision.

Agencies at the national level of government have another tool to control activities at local levels. More than 90% of the state environmental expert reviews are done at the oblast and local levels. More often than not, state environmental expert reviews in Ukraine return a negative conclusion. When the conclusions of the state expert review are negative, the project should be scrapped or modified, at least in theory.

Ecological audit (review), introduced in Ukraine in 2004, should be noted as a positive development on this issue. The corresponding legislation was adopted by the Ukrainian parliament in a form of the "Law on Ecological Audit." It determines the legal and organizational basis of functioning of the ecological control over all polluters, without regard to the type of ownership, and is aimed at determining an economic rationale for functioning of all types of enterprises which leads to environmental pollution (The Law of Ukraine on Ecological Audit, 2004).

However, environmental review in Ukraine preserves a number of features inherited from the old Soviet practice, and has not been as effective as it could be because of them. First, MENRU does not have the capacity to manage the environmental review process adequately. Second, in the absence of new technologies, MENRU struggles with the choice between economic development and environmental protection.

International Factors

Furthermore, Ukraine is an active participant of the "Environment for Europe" process. In 2003, Ukraine hosted the 5th Pan-European Conference of Ministers of Environment "Environment for Europe," in which delegations from 51 countries of UNECE region, 29 international organizations, representatives of non-government civil ecological organizations and world mass media took part. The Conference culminated in the signing of the Framework

Convention on Protection and Sustainable Development of the Carpathians, the Protocol on Strategic Ecological Assessment, the Protocol on registers of emission and pollutants transfer, and the Protocol on civil responsibility and compensation for the damages caused by the trans-boundary influence of the industrial accidents on the trans-boundary waters.

Along with other countries, Ukraine also supported the Strategy of ecological partnership and the Water initiative for Eastern European countries, the Caucasus and Central Asia, the Declaration on energy sufficiency, the Kyiv Resolution on biodiversity, the declaration on elaboration of the UNECE Strategy on education and sustainable development, and other important documents. In 2004, the Parliament of Ukraine adopted the Law on Environmental Network, a piece of legislation which is unique in Europe.

As Ukraine undergoes the processes of integrating with Europe and acceding to the World Trade Organization (WTO), the strategic possibility arises to create and realize a balanced sustainable development policy. WTO membership, European integration, and sustainable development are mutually dependent objectives, and interconnected parts of a complete Ukrainian national development agenda (UNDP, 2007).

Politically speaking, Ukraine is already a party to major international conventions. On a legislative level, it has approved various national programs. Among them is the National Program for Environmental Rehabilitation of the Dnipro River Basin and Improvement of the Quality of Drinking Water, the All-State Program for Establishing Ukraine's National Ecological Network for 2000-2015, the All-State Program for Protection and Rehabilitation of the Azov and Black Sea Environment, and the All-State Program for Toxic Waste Management (UNDP, 2008).

At the same time, there are still legally unsettled administrative issues concerning the distribution of authority and responsibilities in the domain of environmental protection between the bodies of executive power and the bodies of local governments. The key is the issue of ensuring effective implementation and observance of the existing laws. On the policy level, both Ukrainian and international experts agree that the establishment and observance of policies directed toward improving water quality in Ukraine need to be among the top priorities for the Ukrainian government. However, despite governmental efforts to improve water quality, the situation with the quality of water resources in Ukraine not only remains troublesome, but continues to worsen every year (UNDP, 2007).

To summarize, on the one hand, Ukraine seems to have a well-developed body of environmental laws and policies. There are a number of legal and policy documents providing guidance on biodiversity conservation. On the other hand, the process of decentralizing governmental decision-making in Ukraine has led to an imbalance in a governmental system that previously used a heavily centralized policy implementation process, while the system which is being developed seeks to become decentralized by giving more power and responsibility to local elected authorities such as city councils and local governments. Despite domestic and international attempts to improve its water quality, Ukraine keeps struggling with poor water quality. This makes us look at the dynamics of the process of implementation and more specifically, the main tools of environmental management in Ukraine.

Discussion

Redistribution of power between the local and national levels of the Ukrainian administrative system has been and remains among the most difficult parts of democratic transition and consolidation in Ukraine. With no horizontal cooperation between local governments and little effective vertical coordination from the center, decentralization has led to growing corruption at local levels, as has been happening in many different regions in the world (Asthana, 2008; Sorin, 2005). Ukraine is no exception to this trend. What was named as the "feudalization" of power relations on the "periphery" as local leaders were distributing resources and providing for law and order on the basis of personal relationships and corrupt practices, has been often attributed to the results of failed decentralization (Cirtautas, 1995).

Decentralization does not provide an automatic relief. It, therefore, can become an impediment to the process of policy implementation if it is confused with the issue of reducing the state's capacity to implement nation-wide programs on the local level. It is imperative not only to restructure the state, but, through this restructuring, to enhance the state's capacity to steer societal transformation (Hage and Shi, 1993).

Given the current financial structure of money transfers in Ukraine from the center to the local governments for specific projects, the process of addressing environmental concerns continues to be extremely slow, because the national government collects not only taxes but also the fines for environmental pollution from local enterprises thus making local governments very ineffective and immobile in their attempts to directly address pressing environmental issues -- especially those that need an immediate response and solution. This system has been failing to reach its stated objective of environmental sustainability (Shevchuk, 1993).

Furthermore, such a system, either deliberately or by happenstance, simply destroys the incentives for the local authorities to adopt tough environmental policies towards the major polluters. These polluters are often thought of as major providers of jobs for the local populace, and thus are major contributors to the local budgets. Therefore, the vicious circle continues, especially in the political discourse at the local and national levels, where the major enterprises are very often represented in the councils of all levels and in the national parliament. Such is the case with Marioupol-based Illich and Azovsteel metallurgical giants, whose interests are carefully represented and protected by politicians and administrators at all levels.

The Ukrainian government has faced multiple challenges in fighting the Soviet legacies in environmental management, which included almost total absence of responsibility for industrial pollution (once the production plans were approved by the state), the closed nature of the decision-making process, and the absence of true information available to the public. Thus, developing a new system for water resources management was not an easy task.

Beginning with the proclamation of independence, governmental objectives concerning the development of an effective system of environmental management have been clearly stated and reflected in the Constitution, laws and normative acts of Ukraine. However, the implementation continues to present a serious challenge, because the majority of policy instruments in Ukraine have their origins in Soviet environmental practices of the late 1980s and do not provide major polluters clear economic incentives to modernize their enterprises to make them more environment-friendly. By simply imposing fines, the state cannot promote the development of a fundamentally different attitude and approach towards the environment on behalf of large industrial enterprises and general public, especially if the local population is directly dependent on the productivity of these businesses.

Enforcement in the form of penalties may still be needed when the non-compliance is a result of the deliberate actions of local authorities aimed at premeditated underperformance. However, assistance in the form of cash payments and other support may be needed if non-compliance is a result of lack of money, expertise and resources (Breton and Salmon, 2009). The development of local governments and local environmental organizations with a sufficient degree of independence is one of the key mechanisms for reforming the system. Western experience in building local governments and local institutions for environmental management can provide greatly-needed guidance in establishing public control and other democratic practices over the pollution issues. Furthermore, the Ukrainian public does not have access to the information which would reflect the real situation concerning environmental pollution and water pollution especially. Environmental protection groups are weak on the local level and do not represent a serious threat to the "industrial monsters." Finally, there is very little if any "environmental education" in schools and higher education institutions.

Improvements in the operational efficiency of policy compliance tools, particularly the linkage of enforcement and assistance with water quality improvement, will be needed. Further, there are significant opportunities to increase water utility revenue by improving the collection of user charges. This will require some investment, and in a country with economic turmoil the cost is likely to be passed on to consumers in the form of tariff increases for water usage. In Ukraine, where poverty is widespread, affordability may be an important constraint. To ensure that tariff reforms do not lead to social unrest, these reforms need to go hand in hand with sufficient improvements in water quality to ensure that consumers are willing to pay. The government may need to implement measures to subsidize water usage for the poorest part of the population. Enabling water utilities to become more independent, commercializing their operations, introducing tariff-setting mechanisms that allow for the greatest possible level of transparency and predictability, and applying sound financial planning methodologies will enable Ukraine to address water quality issues through decentralization. Financial strategies need to be developed which take into account the local governments' cycles of financial planning. Another great help in this matter would be the use and measurement of social indicators, such as the continuity of the water supply, the number and severity of pipe breaks, and the quality of water at the tap. This is where international cooperation can be of special value. The UN has established a Joint Monitoring Program, and works with many organizations around the world on identifying and testing such indicators.

Conclusion

The case of Ukraine demonstrates that ensuring compliance is among the main challenges for a governmental system that is aiming at policy decentralization as a tool for improving environmental safety. When compliance is ensured almost exclusively by using enforcement mechanisms, such as administrative and legal penalties, this does not necessarily bring the desired outcome of sustainable environmental development. In addition, when permitting remains the key regulatory and control tool, this indicates that the system is failing to truly decentralize, and the top-down structure of water management becomes an impediment to embracing an effective system of water management.

Furthermore, the Ukrainian system of intergovernmental relations clearly lacks a balance concerning the distribution of authority among the different levels of government. It continues to be very centralized in some respects, especially

finances, and yet allows for local governments to ignore the decisions of central authorities in some other instances, including the responsibility for upholding environmental standards.

The Ukrainian case demonstrates that in order to deter future non-compliance, a fine should at a minimum eliminate any financial gain or benefit the operator has obtained as a result of his non-compliance. The "benefit component" of a fine corresponds to the delayed or avoided compliance costs or the illegal competitive advantage and puts the violator in a less favorable situation compared to those who comply with the requirements in a timely manner. The additional penalty amount, or the "gravity component," should reflect the seriousness of the offense and the operator's behavior. Ukraine, however, has no analytical instruments and legal mechanisms to calculate the financial benefit of non-compliance or the seriousness of offenses. This, coupled with the very low collection rate of such fines, undermines the implementation of this instrument in Ukraine.

Based on these conclusions, the following recommendations can be made in order to strengthen the design and implementation of environmental fines. The new decentralized system needs to have an effective system for the collection of fines for environmental offences. This will require further development of laws and regulations.

National enforcement policy can be strengthened by combining it with assistance policies and by making it more transparent. This can be achieved through greater public participation in the policy-making process and granting easier access to pertinent information for the population. This will also require upgrading the information management systems related to the application of environmental fines. Public entrepreneurship in water resources management can contribute effectively to supplementing "top-down" control and punishment mechanisms with "assistance" tools. This would allow local authors to take on a larger ownership of the system of water management and can eventually lead to sustainable environmental development at the regional level.

These changes need to be a part of the further development of the Ukrainian National Environmental Plan. Specifically, political decentralization needs to be accompanied by commensurate administrative decentralization. Decentralization can be an effective tool in this plan, if it is accompanied by policy and administrative vehicles that ensure compliance and cooperation among different levels of government and political forces at all levels.

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