



Environmental Policy and Technology Project

**For the New Independent States
of the Former Soviet Union**

Contract No. CCN-0003-Q-00-3165-00

**UKRAINE, BELARUS, AND
MOLDOVA**

FINAL REPORT

Delivery Order No. 5

**WESTNIS Environmental Program Phase I:
Quick-Start Initiatives and Long-Term Program
Specification and Start-Up**

Prepared for:

**Bureau for Europe and the New Independent States
U.S. Agency for International Development**

Prepared by:

**Environmental Policy and Technology Project
A USAID Project Consortium Led by CH2M HILL**

PREFACE

Under the 1992 Freedom Support Act, the United States Congress initiated a program to provide assistance to new independent states (NIS) of the former Soviet Union. Cooperative Agreements were signed between representatives of the U.S. government and each country in which assistance was to be undertaken. The U. S. Agency for International Development (USAID) was given the responsibility to coordinate all U. S. Government assistance to the NIS under the Act. The strategic objectives of USAID's assistance to the NIS were to promote:

1. Environmentally sound, sustainable economic development during the transition to a market based economy;
2. Reduction in pollution-related risks to health; and
3. Reduction of the threats to the global and regional environment.

Through competitive bidding, USAID awarded a multi-year contract to a team managed by CH2M HILL International Services, Inc. (CH2M HILL) to support implementation of an environmental assistance program to republics of the former Soviet Union. Under this contract, termed the Environmental Policy and Technology (EPT) Project, CH2M HILL was to assist USAID's missions in Moscow, Kyiv, and Almaty undertake a program to promote environmental improvements in the NIS.

The CH2M HILL team included the following organizations:

- ! Center for International Environmental Law
- ! Clark Atlanta University/HBCUMI Environmental Consortium
- ! Consortium for International Development
- ! Ecojuris
- ! Environmental Compliance, Inc.
- ! Harvard Institute for International Development
- ! Hughes Technical Services Company
- ! International Programs Consortium
- ! International Resources Group, Ltd.
- ! Interfax Newsagency
- ! K&M Engineering
- ! Ogden Environmental and Energy Services Company
- ! World Wildlife Fund (US).

The USAID mission in Kyiv supports environmental, and other, assistance programs to Ukraine, Belarus, and Moldova. CH2M HILL established an office in Kyiv, Ukraine to manage and support activities in these countries under the EPT Project. As appropriate, field offices were established at specific project sites within the countries. The project's headquarters office in Washington, D.C. provided overall direction and management support for project activities in all regions.

This report was prepared as a contractually required deliverable under the contract between USAID and CH2M HILL. Although work on this report was conducted in cooperation with the assisted governments and USAID, the findings and recommendations are those of the CH2M HILL team. They do not necessarily represent official positions of the governments of the assisted countries nor of USAID.

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Section 1 Introduction

1.1 Overview of the USAID/WESTNIS Environmental Assistance Program

The former Soviet Union sought production and production increases above all, particularly in heavy industries, agriculture, and defense related sectors of the economy. Natural resources were largely regarded as inexhaustible, and accordingly, not valued in use or seen as components of ecosystems which might be killed, damaged, or rendered less productive by mis-uses. The result was extensive environmental degradation, massive pollution, and ecosystem stress. These have had negative health consequences as well as deleterious effects on the viability of various industries.

Since independence, behaviors that caused despoilment of the environment have hardly changed. At the scale of the enterprise, including large farms, there remains little real incentive to save resources or reduce pollution. The current administrative and productive system confronts a legacy of past pollution. And, despite the reduction in immediate pollution dynamics in certain sectors which economic malaise has brought, the mitigation of a continuing flow of new pollution and destructive resource management is even less practical than before as the economy declines.

Environmental information has been found to be unreliable. While vast amounts of statistical information are collected by numerous central and local institutions, these are most often generated using outdated collection and analytical techniques and simply do not add up.

The USAID Regional Mission for Ukraine, Belarus, and Moldova (USAID/WESTNIS) was established in 1993 and, faced with the Soviet Union's environmental legacy, began to develop an environmental program comprising three separate but interconnected activities:

- ! obtain effective environmental information;
- ! undertake integrated ecosystem restoration;
- ! address special industrial and environmental problems.

In October 1993, the Environmental Policy and Technology (EPT) Project contract, designed to support implementation of USAID's environmental assistance to the republics of the former Soviet Union, was awarded to a team managed by CH2M HILL International Services, Inc. (CH2M HILL). Four delivery orders for work to support the Aral Sea Program were executed under the EPT Project contract beginning in 1994:

Delivery Order No. 5 - WESTNIS Environmental Program Phase I: Quick-Start Initiatives and Long-Term Program Specification and Start-Up;

Delivery Order No. 9 - Project for Ukraine, Belarus, and Moldova: Mitigating Health and Economic Consequences of Environmental Mismanagement;

Delivery Order No. 13 - *Industrial Pollution Control Assessments/Audits*;

Delivery Order No. 15 - *Infrastructure and Energy Efficiency, Ukraine*.

1.2 Introduction to Delivery Order No. 5

Delivery Order No. 5 (DO 5) was executed in July 1994 to support USAID/WESTNIS in its efforts to design and implement its environmental program. USAID had little information regarding environmental issues in each country and needed such information in order to develop its environmental program. At the same time, it was important to identify projects that could be quickly implemented so as to demonstrate USAID's commitment to environmental assistance.

This report reviews the scope of work, deliverables and major accomplishments of and lessons learned from the work carried out under Delivery Order No. 5. The body of this report contains four main sections : II. Delivery Order Objectives and Scope; III. Deliverables; IV. Major Accomplishments; and V. Lessons Learned.

Section 2

Delivery Order Objectives and Scope

2.1 Delivery Order Objectives

Delivery Order No. 5 had four objectives:

1. Priority setting, consensus building and assistance targeting (Ukraine);
2. Acquisition of immediately required environmental information (Ukraine and, to a lesser extent, Moldova and Belarus);
3. Program startup, including development of quick-starts and specification of long-term programs in integrated ecosystem management, and concerning special environmental and industrial problems (Ukraine);
4. Subproject startups (Ukraine and Moldova).

2.2 Delivery Order Scope

In order to meet these objectives, DO No. 5 specified the following scope of work:

1. Priority setting, consensus building and assistance targeting: Support USAID in working with the major central institutions in Ukraine to achieve a consensus regarding environmental problems, and establish a matrix of priorities and target preferences. Conduct a start-up workshop with appropriate Ukrainian agencies in order to help define USAID's environmental assistance priorities.
2. Acquisition of immediately required environmental information: Gather information on pollution and health risk, on what Ukrainian institutions are now doing and what their capabilities are, and on the status and application of environmental legislation. Specific tasks include preparing directories of environmental agencies and institutions; survey, evaluate and translate environmental laws, regulations and policies; survey analytical laboratory capabilities; review and evaluate existing GIS capabilities; and plan and initiate data collection and analysis for an environmental pollution and health atlas in Ukraine.
3. Program startup, including development of quick-starts and specification of long-term programs in integrated ecosystem management, and concerning special environmental and industrial problems: Develop quick starts and draw up specifications for the long-term WESTNIS program. Quick starts to include means of improved food and water quality analytical capacity, GIS capacity-building and applications to major environmental systems' management and problem identification, pilot toxic waste management schemes, and environment/health data improvement for decision-making. Long-term program specifications to include integrated ecosystem management, evaluation of special environmental and industrial problems that require innovative solutions including special

technological applications and managerial changes, and recommendations for training in the U.S. under the NET Project.

4. Subproject startups: Fund first stages of the quick-starts as outlined in (C) above.

2.3 Activity Implementation Plans

Most of the specific activities under Delivery Order No. 5 were authorized through Activity Implementation Plans (AIPs), which specified the scope, deliverables, schedule, and budget of each activity. AIPs were, in general, first developed in the field at the request of the USAID Regional Mission and were approved by both the USAID Contracting Officer's Technical Representative (COTR) and the Regional Mission. While the delivery order scope of work permitted authorization of activities in any of the three countries, in actuality, few authorized activities concerned Belarus due to political differences between the governments of the United States and Belarus.

Delivery Order No. 5 was formally modified three times. The only significant modification was Modification No. 3, dated November 5, 1996, which extended the period of performance of AIPs 5-11, 15-17 and 23 to December 3, 1996 and of AIPs 20 and 24 to September 28, 1997. There was no change in the objectives or scope of work with any of these modifications.

Section 3

Delivery Order Deliverables

Article IV, Reports/Deliverables of Delivery Order No. 5 specifies the following deliverables for the “quick-start initiatives” of item C of the Scope of Work:

...Phase I reports that describe work completed, methodology used, lessons learned and conclusions, sub-projects specifications as required, and recommend and identify further work to be undertaken...

For the long-term environmental program specification of item C, Article IV specifies:

...recommendations for scopes of work for future environmental projects.

These required deliverables were further defined in each AIP, which specified the scope of work, schedule, budget, and deliverables for each activity. Appendix A provides the completion status and submission record for deliverables required by the AIPs, as well as for deliverables required by Article IV of the delivery order itself. The scopes of work of all authorized AIPs have been completed, and all required deliverables submitted to USAID and counterparts, as appropriate.

Section 4

Delivery Order Accomplishments

Significant accomplishments can be identified for each of the four main tasks listed in Articles II and III of the delivery order, as described below.

4.1 Priority Setting, Consensus Building and Assistance Targeting

Under AIP 12, and in accordance with Item A of Article II, Objectives, of Delivery Order No. 5, a *Joint Ukrainian-U.S. Forum on Proposed USAID Environmental Assistance Initiatives in Ukraine* was conducted in November 1994. The linkages forged, dialogue established, needs surveyed, and issues raised in this forum by Ukrainian agencies with environmental jurisdiction and responsibilities, and their U.S. counterparts, laid the foundation for the Ukraine-American Work Groups which were established under Delivery Order No. 9 and which later became the *Program to Promote Sustainable Development in Ukraine*.

4.2 Acquisition of Immediately Required Environmental Information

Under AIPs 2 and 10, directories of environmental agencies and institutions in Ukraine, Belarus and Moldova were prepared. Under AIP 5, a survey and evaluation of geographic information system capabilities was conducted. Under AIP 11, a survey and evaluation of analytical chemical testing facilities were conducted. A report entitled *Ukraine: Health Problems and Priorities in a Regional Perspective* was prepared by Prof. M. Feshbach, co-author of the book *Ecocide in the USSR*. A survey, evaluation, and translation of Ukraine's environmental statutes was conducted. Collectively, these activities fulfilled the information-gathering requirements identified in Article III, Scope of Work, that related to Item B of Article II, Objectives, of DO 5. Information collected during these activities played an important role in helping USAID design future assistance activities for implementation under the EPT Project.

4.3 Program Startup

Many program start-up activities focused on initiating future assistance activities. These activities supported specification of long-term programs, including identification of needs and conceptualization of projects to meet those needs. The relevant Activity Implementation Plans include AIP 4 which specified evaluation of environmental health assistance in Crimea, AIP 6 which specified evaluation of needs and possible assistance projects in the water and wastewater sector, AIP 7 which specified the same in the field of environmental economics and policy, AIP 8 for work on industrial pollution

issues, and AIP 9 for work on environmental agency institutional strengthening. Results of the work performed under these AIPs was used by USAID in designing future assistance activities in Ukraine, Belarus, and Moldova under the EPT Project. For example:

1. Work performed under AIP 3 led to the *Environmental Risk: Priority Setting and Training* in Moldova under Task M1 of DO 9.
2. Work performed under AIP 4 led to the *Tatar Environmental Health Project* under Task U6 of DO 9.
3. Work performed under AIP 6 led to the *Urban Water Management Demonstration in Lviv* under Task U2 of DO 9, which was followed by significant additional water sector assistance in Lviv under DO 15. Subsequently, AIP 24 enabled the procurement of equipment to implement a demonstration of urban water management in Lviv.
4. Work performed under AIP 8 led to the *Demonstration of Environmental Management of Industrial Waste and Industrial Waste Minimization in Donetsk* under Task U1 of DO 9, which was followed by additional work in Donetsk under DOs 13 and 15.

In other cases, information and recommendations resulting from the authorized activities were utilized by USAID more indirectly in designing future assistance activities. Work performed under AIPs 7 and 9 strongly influenced the sustainable development and institutional strengthening themes and organization of the *Ukraine-American Work Groups* under Task U5 of DO 9, that subsequently became the *Program to Promote Sustainable Development in Ukraine*.

Several AIPs authorized “quick-start”, fast-turnaround activities with immediate impact that were not anticipated at the time the delivery order was prepared. These were:

- ! AIP 19: participate in U.S.-based water utility management training program;
- ! AIP 20: procure office and technical equipment to support DO 9, Task U2;
- ! AIP 21: evaluate sewage emergency in Kharkiv;
- ! AIP 23: assist Ministry for Environmental Protection and Nuclear Safety in printing and distributing the *National Report on the State of Environment of Ukraine*;
- ! AIP 24: following from AIP 6, which led to design of urban water management demonstrations in Lviv under DO 9 Task U2, this AIP enabled procurement and delivery of equipment to implement an actual demonstration of such water management.

4.4 Subproject Startups

While subproject startups were covered by Item D of Article II, Objectives, of Delivery Order No. 5, they were omitted from Article III, Scope of Work, and no subproject start-up work was

authorized. However, some AIPs, e.g. *Evaluating Environmental Health Assistance in Crimea* under AIP 4, authorized activities that closely resembled the project start-up work envisioned under this task in that they were fast-turnaround projects both designed and implemented under DO 5..

Section 5

Delivery Order Lessons Learned

Delivery Order No. 5 envisioned use of a combination of approaches to provide USAID with the information it needed to design future EPT Project technical assistance activities to be provided in Ukraine, Belarus, and Moldova:

- ! set priorities, build consensus, and target assistance;
- ! rapidly obtain environmental information;
- ! identify needs in different sectors and conceptualize several alternative short- and long-term assistance projects.

Based on the experience of DO 5 and the subsequent delivery orders for Ukraine and Moldova that grew out of it (i.e., DOs 9, 13, and 15), it can be concluded that such a strategy of using a mix of approaches can be very effective in providing USAID with the basis for designing a program of assistance in countries where it has limited or no prior working experience.

Appendix A
Status of Deliverables

Task	Delivery Order Deliverables	AIP Deliverables	Status of Deliverables
Priority Setting, Consensus Building, and Assistance Targeting			
1	Joint U.S.-Ukraine environmental assistance program start-up workshop	AIP 12 - Joint U.S.-Ukraine environmental assistance program start-up workshop	Workshop held November 3-4, 1994. Results reported in <i>Joint Ukrainian-U.S. Forum on Proposed USAID Environmental Assistance Initiatives in Ukraine. Notes of Meeting Held in Kyiv on 3-4 November 1994.</i> January 1995
Immediate Information Requirements			
2	Directories of environmental agencies and institutions in Ukraine, Belarus and Moldova	AIP 2 - Directory of major environmental ministries, agencies, institutions, and NGOs in Ukraine AIP 10 - Directory of major environmental ministries, agencies, institutions, and NGOs in Belarus and Moldova; updated directory for Ukraine	Deliverables submitted: Trip Report - J. Pecevich, 16 September - 29 October 1994 (plus reports on trip segments) <i>Belarus Environmental Directory</i> <i>Moldova Environmental Directory</i> <i>Ukraine Environmental Directory</i>
2	English-language translation of Ukrainian environmental laws and regulations	Not Applicable	Deliverable submitted: <i>Ukraine: English-Language Translations of Ukraine's Environmental Statutes and Evaluation of These Statutes</i>
2	Survey and evaluation of environmental laws, regulations, and policies	Not Applicable	Deliverable submitted: <i>Ukraine: English-Language Translations of Ukraine's Environmental Statutes, and Evaluation of These Statutes</i>
2	Survey and evaluation of analytical chemical testing facilities	AIP 11 - Survey and evaluation of chemical analytical testing capabilities AIP 11, Revision 1 - Scope of work regarding chemical laboratory quality assurance	Deliverables submitted: Trip Report - S. Fry, 4 October - 14 November 1994 <i>Evaluation of Analytical Testing Capabilities in Ukraine</i> , by S. Fry <i>Scope of Work for Chemical Laboratories Quality Assurance Plan</i> , by S. Fry
2	Survey and evaluation of GIS capabilities	AIP 5 - Survey and evaluation of GIS capabilities	Deliverables submitted: Trip Report - S. Morain, 8-27 August 1994 <i>Geographical Information Systems (GIS) Capabilities in Ukraine</i> by S. Morain
2	Initiation of environmental health atlas	Not Applicable	Results reported in <i>Ukraine: Health Problems and Priorities in a Regional Perspective</i> , by M. Feshbach
Quick Starts and Long-Term Program Specification			
	Reports on quick-start subprojects and long-term programs, with recommendations for scopes of work, as specified in AIPs	AIP 3 - Presentation at environmental health conference in Moldova	G. Charnley attended and presented at the environmental health conference in Moldova in January, 1994. Deliverable Submitted: Trip Report - G. Charnley, Conference on the Impact of the Environment on Health, Moldova, 14-21 January 1994
3		AIP 4 - Preliminary investigation of possible potable water, sanitation, and environmental health interventions in Crimea	Deliverables submitted: Trip Report - B. Carr, 20 July - 13 August 1994 <i>Preliminary Investigation of Water, Sanitation, and Environmental Health Conditions of Crimean Tatar Regions</i> , by B. Carr
3		AIP 6 - Specialist technical assistance in water and wastewater engineering	Assistance provided. Results reported in: Trip Report - A. Schultz, 7 August - 7 November 1994 (plus reports on trip segments) <i>Ukraine, Belarus & Moldova: Review of Water Resources Sector and Identification of Possible Assistance Projects</i> , by A. Schultz
3		AIP 7 - Specialist technical assistance in environmental economics and policy	Assistance provided. Results reported in: Trip Report - J. Romm, 10 August - 24 October 1994 <i>Ukraine, Belarus, and Moldova: Review of Environmental Economics and Public Policy, and Identification of Possible Assistance Projects</i> , by J. Romm

Task	Delivery Order Deliverables	AIP Deliverables	Status of Deliverables
3		AIP 8 - Specialist technical assistance in environmental engineering	Assistance provided. Results reported in: Trip Report - S. Rothschild, 15 August - 15 November 1994 (plus report on trip segment) <i>Ukraine & Belarus: Review of Industrial Pollution Issues and Identification of Possible Assistance Projects</i> , by S. Rothschild
3		AIP 9 - Specialist technical assistance in urban planning (institutional development)	Assistance provided. Results reported in: Trip Report - W. Maggs, 12 October - 3 December 1994 <i>Ukraine, Belarus & Moldova: Review of Environmental Management Institutions and Identification of Possible Assistance Projects</i> , by W. Maggs
3		AIP 16 - Editing of DO 5 reports	Editing provided by J. Haber
3		AIP 18 - Scopes of work for biodiversity assistance to Ukraine	AIP deleted by USAID. Work instead undertaken under DO 9, Task U3
3		AIP 19 - Participation in U.S.-based water utility management training program	EPT Project Lviv office Resident Advisor accompanied Lviv Vodokanal officials on study tour to U.S.. Results reported in <i>Report of Study Tour: Water Utility Management Training, 13 August to 1 September 1995</i> , by A. Sipiv
3		AIP 20 - Procurement of office and technical equipment to support Lviv Vodokanal demonstration project Phase 1 - general administration and system investigation equipment Phase 2 - demonstration project equipment	Phase 1 equipment procured and installed for use by EPT Project Lviv office. Phase 2 water meters procured and installed as part of Pasichna water service improvement demonstration project
3		AIP 21 - Assistance to USAID/Kyiv in evaluating sewage emergency in Kharkiv	Assistance provided by EPT Project Regional Director and EPT Project Lviv office Resident Advisor who accompanied USAID/Kyiv representatives to Kharkiv 23-26 July 1995 to assess major sewage treatment plant breakdown and evaluate possible USAID assistance
3		AIP 22 - Assistance to MEPNS with seminar on <i>Environmental Action Program for Central and Eastern Europe</i>	Logistical and financial support provided for Seminar held September 14-15, 1995
3		AIP 23 - Assistance to MEPNS with printing and distribution of <i>National Report on the State of Environment of Ukraine</i>	Logistical and financial support provided in last quarter of 1996
		AIP 24 - Design, procurement, preparation, delivery and provision of technical assistance for the installation of modular pumping plant to Pasichna Area of Lviv AIP 24, Revision 1 - Data collection for initial environmental evaluation of Pasichna water supply project: Task A - Project description Task B - Sampling and analysis plan Task C - Report on water consumption and well field capacity Task D - Estimation of wastewater outflows Task E - Report on water quality and statistical analyses	Modular pump station installed and put into operation December 1996. Results reported in: <i>Ukraine: Description of Water Supply Improvement Demonstration Project, Pasichna District, Lviv</i> (Task A, C, and D deliverables) <i>Ukraine: Pasichna Water Quality Sampling and Analysis Plant</i> (Task B deliverable) <i>Ukraine: Drinking Water Quality of the Pasichna District, Lviv</i> (Task E deliverable)
Sub-Project Start-Ups			
4	None	None	Not Applicable

