

Progress Report
to the Canadian International
Development Agency

01 July - 31 December 1996

**Environmental Management
Development in Ukraine**

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**Office for Central
and Eastern Europe
Initiatives**

For additional copies, or for further information about this document, please contact
Ms. Sue Davies at the following address:

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE
P.O. BOX 8500
OTTAWA, ONTARIO
CANADA, K1G 3H9

TELEPHONE (613) 236-6163, EXTENSION 2245

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Acronyms

CIDA	Canadian International Development Agency
DRF	Dnipro Renaissance Fund
EBRD	European Bank for Reconstruction and Development
EMDU	Environmental Management Development in Ukraine
EMIS	Environmental Management Information System
GEF	Global Environment Facility
GIS	Geographical Information System
IBRD	International Bank for Reconstruction and Development (World Bank)
IDRC	International Development Research Centre
MEPNS	Ministry of Environmental Protection and Nuclear Safety (Ukraine)
NATO	North Atlantic Treaty Organization
OCEEI	Office for Central and Eastern Europe Initiatives (of IDRC)
UMC	Ukrainian Management Committee
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USCPW	Ukrainian Scientific Centre for the Protection of Waters

Project Personnel

Dr. Ken Babcock	Senior Scientific Advisor	OCEEI
Ms. Sue Davies	Administrative Assistant	OCEEI
Mr. Kerry Franchuk	Program Officer	OCEEI
Mr. Jean-H. Guilmette	Director	OCEEI
Dr. Ihor Iskra	Kyiv Technical Liaison Officer	OCEEI
Mr. Myron Lahola	Kyiv Office Director	OCEEI
Ms. Marie-Claude Martin	Program Officer (Economics)	IDRC
Dr. Zbigniew Mikolajuk	Senior Program Specialist (Expert Systems)	IDRC
Ms. Zsofia Orosz	Assistant to Senior Scientist	OCEEI
Ms. Irina Rudenko	Kyiv Financial Officer	OCEEI
Ms. Olena Rudenko	Kyiv Office Administrator	OCEEI
Dr. Alexander Mazurkevych	Head, Water Basins and Resources Directorate	MEPNS
Dr. Vasyl Shevchuk	First Deputy Minister	MEPNS
Dr. Anatolii Stashuk	Head, Dnipro Problems Department	MEPNS

Section 1: General

1.1 Background

The *Environmental Management Development in Ukraine* (EMDU) Project is funded by the Canadian International Development Agency (CIDA) through a Contribution Agreement signed by the International Development Research Centre (IDRC) and the Department of External Affairs on 30 March 1994.

The project began almost immediately thereafter, on 1 April 1994, following a pre-negotiated detailed plan established with the full agreement of the Ukrainian Government. Upon signature of its agreement with the Department of External Affairs, IDRC proceeded to sign a Memorandum of Grant Conditions, or protocol, with the Ukrainian Ministry of Environmental Protection. The Memorandum was signed on June 24, 1994 and activities began immediately. In late 1994, the Ministry saw its mandate expanded and name changed to the Ministry of Environmental Protection and Nuclear Safety (MEPNS), while the Bureau of Assistance for Central and eastern Europe moved From External Affairs to CIDA in mid-1995.

The Contribution Agreement and, as a result, the Memorandum of Grant Conditions, set out the management framework for the project, referred to as a program of research and development activities.

1.2 Objectives

The goal of the project is to contribute to the environmental rehabilitation of the Dnipro River system through the collaborative efforts of Ukrainian and Canadian institutions and organizations.

The original project proposal listed a number of objectives that were revised in 1995. The revisions were affirmed at the Joint Management Committee meeting in October of that year. At CIDA's request, IDRC subsequently sought formal approval for the changes from MEPNS. Minister Yurii Kostenko reiterated IDRC's position, opining that the newly formulated objectives so closely resemble those as originally stated that he saw no need formally to sign the change request.

The recast objectives are:

- to strengthen the capacity of Ukrainian institutions to manage the Dnipro River system, particularly its water quality
- to identify means of reducing water pollution in the Dnipro River, specifically in Zaporizhzhia region

- to foster long-term collaborative links between Canadian and Ukrainian public and private sector environmental organizations
- to encourage the exchange of information and experience between Ukrainian scientists and policy-makers and between these two groups and their counterparts elsewhere

1.3 Introduction

This progress report, prepared in partial fulfillment of the terms and conditions of our Contribution Agreement, analyzes research and development activities as managed by IDRC. It also gives an overview of the specific activities approved to date for funding under the grant component of the project.

Section 1 of the report provides general background and the project objectives.

Section 2 is an overview of the progress made to date and reflects on the continuing validity of initial assumptions, as well as an assessment of the current overall project status.

Section 3 goes into the detailed description of the management, technical assistance and research and development activities of the project over the last 6 months, while Section 4 gives the work plan for the first half of the 1997 project year.

Section 5 discusses budgetary issues and Section 6 closes the document.

Section 2: Overall Progress

2.1 Constraints

The constraint noted here is part of a chronic problem throughout EMDU: how to transfer funds to Ukraine. This latest development has affected overall progress over the last 6 months.

Financial and Political Climate of Ukraine

The most significant constraint of the latter half of 1996 was the presidential decree, issued officially in December but having come into effect in practice as early as October, subjecting foreign donor money to heavy taxation. By October's Joint Management Committee meeting, Dr. Vasyl Shevchuk took the opportunity to elaborate on the decree, to ask that IDRC send no funds to Ukraine until further notice and to assure all parties that MEPNS and other bodies were doing all they could to rectify the problem.

Nonetheless, as of this writing, the problem continues, seriously inhibiting IDRC's efforts to send research funds to Ukraine. Over \$100,000 is in the pipe, ready to flow upon cancellation or revision of the decree. Sections 3 and 4 mention those activities affected by the decree. The backlog is reflected in the attached budget under "commitments."

The effect of the lack of cash flow on actual program activities has been varied: generally speaking, those activities relying on purchase of equipment or other goods to engage in work have been halted pending necessary acquisitions. Other research work, however, has continued despite non-payment of salaries: this is attributable both to the economic reality of the country, where workers often go without pay for extended periods of time, and to the dedication of the workers involved.

2.2 Opportunities

A number of noteworthy opportunities have surfaced or evolved over the last semester.

Arrangement of the Kyiv Office

The previous Progress Report listed the Kyiv Office as constraint due to the lack of technical support available there. However, significant administrative and personnel changes there have streamlined operations and enhanced the technical side of the operation to the point that the Kyiv Office is no longer a constraint, but an integral and necessary part of IDRC's operations. See section 3.3.

Dnipro Renaissance Fund

The Dnipro Renaissance Fund has demonstrated its project management capabilities in initiating the sizable *Environmental Audits and Follow-up Technologies* activity. Moreover, DRF is

exploring avenues of cooperation with various foreign organizations, including some Canadian bodies that established links through EMDU. These include:

- AGRA Earth and Environmental, which is interested in conducting environmental and quality upgrading in the meat industry
- University of Windsor, which is looking at teaching in Ukraine environmental courses modeled on those offered by the University
- Ecologistics Limited, which is exploring proposals aimed at the environmental consulting industries, environmental impact assessments and environmental standards in the agri-food industry

In addition, DRF remains a reliable conduit for the channeling of funds. Having undergone an audit by Ukrainian authorities and an overview by an IDRC financial officer, DRF has been shown to be in compliance with Ukrainian law and IDRC policy.

Administration

The Ukrainian Management Committee (UMC) continues its proactive stance, approving all Ukrainian progress reports and vetting proposals. With IDRC's input, the proposals continue to improve, particularly in the budget area.

2.3 Status

This sub-section summarizes progress achieved so far in the project. The discussion follows the Work Breakdown Structure presented formally in Appendix B.

Management [1000]

The IDRC Management Committee in Ottawa consists of the Office for Central and Eastern Europe Initiatives (OCEEI) Director, the Senior Scientific Advisor, 3 Program Officers, a part-time researcher, and the office administrator.

First Deputy Minister Vasyl Shevchuk heads the Ukrainian Management Committee. UMC continues to maintain control of project and report approval, with IDRC contributing with recommendations for improvements on a case-by-case basis. IDRC continues its transparent operations, maintaining lines of communication with UMC, as well as supplying all the necessary information, including financial, that it needs to carry out its duties.

DRF is responsible for the financial administration for all activities.

Administrative functions of the Kyiv Office have largely been turned over to Ms. Lesia Rudenko, the Administrative Coordinator, who was aided by IDRC personnel from Ottawa who traveled to Kyiv in November to bring the office directly in line with IDRC standards of operation. Ms. Irina Rudenko has taken over as the Office's Financial Officer.

The Kyiv Office continues to provide support services to visitors from IDRC and other Canadian partners and continues writing monthly Highlights Reports, summarizing coordination activities, services rendered to project visitors, training delivered, and the number of women participating directly in project activities. The reports are sent to Ottawa and to UMC. (see Document OCEEI.34, 37-40)

Technical Assistance [2000]

Dr. Ken Babcock continues to oversee all activities from the technical side as Senior Scientific Advisor. The remaining three Program Officers, Ms. Marie-Claude Martin, Dr. Zbigniew Mikolajuk, and Mr. Kerry Franchuk, continue to offer technical assistance.

The new Kyiv Office Director, Mr. Myron Lahola, has brought a strong technical background to the office, as well as familiarity with specific EMDU activities. His duties involve technical support, particularly in the area of municipal water supply and waste water, as well as supervision of larger policy and administration questions and the handling of diplomatically sensitive issues. The technical liaison officer, Mr. Ihor Iskra, has settled into his role and now provides considerable support in proposal preparation and technical report preparation, including formulating abstracts for the Ottawa Office to evaluate. With Mr. Lahola and Mr. Iskra managing the technical portion of the project from Kyiv, IDRC maintains a strong technical presence in Kyiv.

Research and Development Activities [9000]

The EMDU project now comprises 29 different activities, 16 of which remain active, distributed in seven groups under two components (see Appendix B).

Section 3: Activities During Second Six Months of 1996

3.1 Work Breakdown Structure

The detailed progress discussions of the next two sections follow the Work Breakdown Structure, presented in Appendix B.

3.2 Management [1000]

IDRC Management [1100]

Supervision [1110] — No significant supervisory changes took place in the last semester.

Administration [1120] — A major evaluation of Kyiv office procedures was undertaken in the fall by Ms. Sue Davies. Her mission was to establish a filing system, evaluate a specialized phone line to cut long distance costs, stream-line procedures in accordance with IDRC policies, study Coop House and make recommendations on creating an "IDRC-style" office.

In November, IDRC sent a representative from the Financial Services Offices of IDRC, Mr. Ray Robinson, to assess the Dnipro Renaissance Fund's financial procedures, among other things. Except for some fine-tuning, the conclusion reached is that the DRF has sound financial accounting practices in place and remains a viable conduit for moving funds into Ukraine.

In related matters, a major objective leading into the summer was to gain IDRC acceptance of a continuing role for OCEEI within IDRC. That goal was reached when the Board of Governors agreed in July that OCEEI has an important role to play as IDRC's arm in Central and Eastern Europe. With this approval, OCEEI is free to pursue further projects and funding for activities in the region.

IDRC Management Committee [1130] — The committee met formally as a group once in the summer, following the return from Kyiv of the Senior Scientific Advisor. A few informal meetings among various members of the group took place as well. Besides everyday project management questions, the main discussions involved further program work in Ukraine, the end-of-project conference, and preparation for UMC's arrival in October.

Steering Committee [1140] — The fifth steering committee meeting took place at IDRC in Ottawa in July 1996. See the Monitor's Minutes (Document AR.60).

MEPNS Management [1200]

Ukrainian Management Committee [1210] — UMC members came to Ottawa in late October for the third Joint Management Committee meeting, also attended by CIDA representatives and

the Program Monitor (see document OCEEI.36). Some members of the Ukrainian delegation, including Dr. Romanenko and Mr. Semchuk, took the opportunity to discuss possible further collaboration with other Canadian parties. One of the main tasks facing UMC upon its return from Ottawa was to lobby to overturn or revise the presidential decree taxing aid money.

UMC approved and passed on to IDRC 6 proposals for funding.

3.3 Technical Assistance [2000]

Project Development [2010] — Except for some final preparations within the Environmental Management Information System (EMIS) activities, there is little need for project development within EMDU at this point. Nonetheless, 6 proposals were received over the last 6 months, each requiring revisions in the opinions of the program staff. Four of the 6 have been approved, the others pending or needing revision. The Kyiv Technical Liaison Officer and Office Director are now providing direct and immediate help as needed. During the second six months of 1996, IDRC program staff traveled a combined total of 3 times to Ukraine.

Activity Monitoring [2020] — Program Officers, the Scientific Advisor and Kyiv staff also monitored technical progress and financial expenditures by institutions carrying out project activities.

3.4 Research and Development Activities [9000]

A total of 7 people received training in the last six months of 1996. One of those was a woman (see Appendix A).

Environmental Management Capacity Building [9100]

Human Resources Development [9110]

Management Skills and Infrastructure Development [9111] — Except for final financial accounting, the Strategy Paper Development activity is closed.

Training Plan and Gender Strategy Development [9114] — Although this activity has been completed, UMC members expressed some concerns about the final reports at the Joint Management Committee meeting in October. IDRC therefore asked UMC to provide a report detailing their views, which IDRC will review and, if necessary, pass on to the consultants who prepared the report.

UMC and IDRC approved a proposal for the creation of a personnel training unit in MEPNS. Although in existence for some time, the Institute of Professional Retraining and Upgrading is in need of equipment and the means to reach out within the Ministry. This activity provides not only for the purchase of basic computer and office equipment, but also will allow the Institute to draw on EMDU collaborators in putting together training sessions and publishing informational materials and training manuals. Initial actions await funds from Ottawa.

Public Hearing Participation [9116] — This activity was formally canceled at the October Joint Management Committee meeting. No further action is required.

Sugar Waste Workshop [9117] — The final report, a book entitled *Efficiency and Waste Management in Beet Sugar Production*, was received in July. Both IDRC and UMC have approved the report, closing this activity.

Environmental Management Information System [9120]

Data Collection/Monitoring System Development [9123] — The final technical report was received in October and enthusiastically approved by IDRC's program officer. Likewise, UMC gave the report high marks for its results. One sub-activity not proposed in the original budget involved a presentation of the Dnipro Geographical Information System (GIS) at a GIS conference in Moscow, where EMDU gained favorable exposure. Final payment awaits the lifting of the Presidential decree.

EMIS for the Dnipro Department [9126] — UMC has asked that residual funds from Phase I, the Budapest Conference, be used to enhance MEPNS's information systems, building on activity 9124 from early in the project. This would include the purchase of printer cartridges and other computer peripherals for the Dnipro Problems Department. IDRC has agreed to the request and will send the funds once the taxation issue is settled.

The awaited proposal for Phase II for this activity was received and accepted by UMC and IDRC in August. This phase concentrates on the establishment of a national Centre in Kyiv, which will eventually be connected with regional centres like Zaporizhzhia, the focus of activity 9127-1. To date, the system design and equipment needs assessment have been completed.

IDRC received and was prepared to approve a proposal for Phase III, dealing with regional centres. However, UMC never approved the proposal, and a complete re-working ensued. Subsequently, preparation of a new proposal got underway, shifting the focus back to that as envisioned at the beginning of EMDU: a turnkey system in Zaporizhzhia, as well as the setting up of local data bases at other regions, for incorporation into future regional centres for a system-wide EMIS. Phase III, therefore, will fall under 9127, *Zaporizhzhia REMIS*.

Zaporizhzhia REMIS (Regional Environmental Management Information System) [9127] — In mid-summer, the project leaders, Dr. Kolodiazhnyi and Dr. Trofimchuk, toured regional information centres in Germany and Netherlands as part of a study tour to garner information on functioning environmental information systems.

The Zaporizhzhia regional centre is up and running. IDRC is awaiting final technical reports before formally closing the project.

Policy and Public Education [9130]

Environment and Water Management [9131] — UMC released a book entitled *Economics and Ecology of Dnipro Water Resources* as the culmination of the project. The book is an edited

compilation of several papers, including issues like macroeconomic reform and the environment, policy tools in environmental management, Ukrainian water management policies, and sectoral studies. IDRC's Program Officer has asked for an English Language abstract, not only to evaluate the book, but to consider it for publication in a western journal.

Public Education [9132] — IDRC and UMC approved a proposal for an *Environmental Legislation Review*. In essence, this activity will collect, edit, publish and make available to Ukrainian NGOs, government bodies, enterprises and educational organizations the body of current Ukrainian environmental legislation, both domestic and international. Work will commence when funds can be moved to Ukraine.

At the Joint Management Committee meeting, UMC promised to send IDRC a proposal for the *Environmental Curriculum in Schools* component.

End-of-project Conference [9133] — In December, OCEEI, with input from UMC, sent an application to the North Atlantic Treaty Organization (NATO) for some \$100,000 in support for an end-of-project conference. The goal is to bring together scientists and policy makers from the 3 riparian countries, as well as from western governmental, donor and non-governmental institutions to disseminate results of EMDU, plan future actions and conduct specific training seminars on selected topics.

Trilateral Cooperation (GEF) [9134] — IDRC's representative in the Global Environment Facility (GEF) proposal preparation, Dr. Jan Barica, visited the UNEP offices in Nairobi Kenya, followed by a trip to Minsk, where a work strategy for writing the report on trans-boundary pollution was formulated with scientific partners from the 3 riparian countries.

Very slow progress was achieved following the initial sessions, with numerous delays by the United Nations bodies. For instance, while UNEP finally gave formal approval in May to include Dr. Barica and IDRC immediately made available the necessary funds for UNEP to pay him, several months passed before UNEP accepted the money and made it available to Dr. Barica. Similarly, although it approved payment to Ukrainian, Russian, and Belarusian scientists involved in report preparation last summer, UNOPS still had not made payment by year's end, seriously delaying work, as scientists were justifiably reluctant to make studies available until they received payment. Finally, although IDRC is an acknowledged and approved partner in the process, the United Nations Development Programme (UNDP) neglected to invite any IDRC representatives to a late June meeting of participants. Fortunately, IDRC's Office Administrator in Kyiv found out about the meeting and attended anyway.

MEP Brochure [9136] — Although IDRC received an informal request last summer from MEPNS to print an updated version of the MEPNS Directory, UMC subsequently informed IDRC at the Joint Management Committee meeting that no follow-up using EMDU funds is planned, although MEPNS intends to update the directory regularly at its own expense. This activity is therefore closed.

Health Risk Assessment [9137] — IDRC and UMC approved a proposal for a health risk assessment, which will examine health data for inhabitants of certain areas along the Dnipro and, using internationally established data linking pollutants to health problems, attempt to identify

those pollutants causing problems for Dnipro populations. Consequently, authorities can establish priorities in taking action to curb Dnipro pollution. The work team awaits funds from Ottawa.

Institutional Framework Review [9138] — This activity was formally canceled at the October Joint Management Committee meeting. No further action is required.

Education through the Media [9139] — Two of the 5 videos for the TV and video activity have been received and approved to date. In September, the project leader and an assistant came to Canada for a study tour and to film and conduct interviews. They visited CBC studios, the Pickering Nuclear facility, the Wastewater Technology Centre in Burlington, the Ash Bridges Bay Sewage Plant in Toronto, and a municipal program aimed at restoring the Don River through community action. In addition, a media professor from Université Laval, Professor Sauvageau, visited them in Ottawa and, having reviewed the first video, made recommendations for improvements and discussed media ethics.

The interim report with the book outline was approved by both IDRC and UMC for *Dnipro: the Artery of Life*. The Ukrainian text is complete and slides to be used for the photographs have also been selected. The print-ready lay-out and English text, however, cannot be prepared until funds can be sent to Ukraine.

Water Pollution Control [9200]

Baseline Water Quality [9210]

Baseline Water Quality [9210] — IDRC received the revised English version of the activity report from Dr. Derek Muir, the Canadian consultant, in late October. Although the report is of high quality, the Program Officer has requested further information from the Ukrainian Scientific Centre for the Protection of Waters to incorporate into the document.

Because of problems with Ukrainian customs, the Ukrainian Scientific Centre for the Protection of Waters (USCPW) was not able to take full possession of the centrifuge that IDRC shipped until late September (it was shipped in early June and arrived in Kharkiv customs about a week later; portions of the equipment were released by customs before September). Mr. Myron Lahola immediately traveled to Kharkiv to train specialists in its use. The delay seriously set back work, however.

The final report from Ekocentre on current water quality control in the Zaporizhzhia region was received and approved by UMC and IDRC, ending Ekocentre's participation in the activity.

Water Quality Standards [9211] — This activity aims to study environmental standards applied to surface waters in Ukraine and map those waters according to these water categories. The contract was signed in December and first payment can be made once funds can be moved into Ukraine.

In mid-January, one of the programs branches in IDRC will be sponsoring a workshop entitled *Technology Exchange Workshop on Toxicity Monitoring of Natural and Drinking Waters*.

OCEEI proposed to Hydrobiology to perhaps consider sending a participant involved in the *Water Quality Standards* activity. In the end, it was agreed that this would be a good opportunity and UMC approved some \$5,500 in residual funds from EMDU for transportation costs.

Environmental Audits [9220]

Audit Team [9222] — IDRC received and approved the final report detailing the preconditions for establishing environmental audits in Ukraine. Once UMC approval has been received, this activity can be closed.

Environmental Audits and Follow-up Technologies [9224] — In August, IDRC sent 2 Canadian experts, one the consultant who was involved in audit training last year by AGRA Earth and Environmental and the other a volunteer from Cargill Limited of Winnipeg, to walk through environmental audits with the environmental audit team established within DRF. In all, audits of 3 enterprises (dairy, meat, alcohol) were conducted in cooperation with enterprise managers and a list of recommendations provided to managers. Some of the low-cost recommendations were implemented at the enterprises.

In November, the AGRA consultant returned to Ukraine, along with Mr. Walter Epp, a sugar expert who has been involved in EMDU for some time, to audit a sugar factory. The factory purchased and installed, with IDRC funding, anaerobic water treatment equipment and received training in its use in Amsterdam. Trial tests of effluents using the equipment were performed.

Green Technologies [9230]

Eastern Europe Review [9232] — The consultant finished her report about one year ago and passed it on to Dr. James Hea, who originated the activity. Because Dr. Hea was no longer with the project, however, the report never received official approval. Among other things, the report will prove useful in the development of the private environmental consulting industry in Ukraine and in establishing networks with the non-Ukrainian, mainly Canadian, environmental industry.

Kyiv Trade Show [9233] — This activity has evolved considerably since its inception due to changes in perceived needs and changes by the partner organizations. IDRC has been in constant communication with the World Bank, which was to be the primary funder of the conference. The Bank, however, has several times changed the focus and schedule for the conference, forcing IDRC to change plans.

Ramial Chipped Wood [9235] — IDRC received a proposal late in the year for launching this activity, aimed at finding environmentally sound and inexpensive fertilizers.

Shoreline Demonstration [9236] — In August, 2 Canadian consultants, one from the University of Windsor, the other from Ecologistics Limited, visited Ukraine to establish plans for and visit the proposed site of the shoreline project. Upon returning to assess progress in November, the consultant and IDRC Scientific Advisor noted that little progress had been achieved. They urged the recipients and UMC to push the activity along to meet its schedule as spelled out in the contract.

Municipal Water Pollution Control [9240]

Sewer and Tap Water Quality [9242] — UMC and IDRC received in July the intermediate report from the Institute of Colloid Chemistry and Water Chemistry concerning drinking water quality and the results of the reconnaissance survey in Zaporizhzhia.

Leak Detection and Water Treatment [9243] —The remaining residential water meters were installed in residences and water consumption data continues to be collected and compiled into a data base. Analysis of data revealed that water consumption in residential dwellings is substantially less than was previously assumed. This information resulted in Zaporizhzhia Vodokanal modifying its water meter installation program to avoid major losses in revenue from apparent reduced water consumption. In addition, the European Bank for Reconstruction and Development (EBRD) loan preparation project taking place in Zaporizhzhia at this time has taken into account results from the water meter project.

The leak detection equipment has become a major part of Zaporizhzhia Vodokanal's leak abatement program. The equipment is used routinely to pinpoint pipe leaks and thereby reduce the time previously spent on searching. Information from the work so far has been used as a basis for the EBRD project team to develop a list of priorities where major water distribution pipe repair by various technologies, including trenchless methods, should be used.

Drinking Water Treatment [9244] — At the October joint management meeting, UMC representatives talked about the need to establish a tap water filter system for areas of the country with potable water problems where, in many cases, water must be trucked in. They proposed an activity to design and build a filter for use in these areas.

Section 4: Work Plan for First Half of 1997

4.1 Management [1000]

IDRC Management [1100]

Supervision [1110] — The Director will continue to supervise the project from IDRC offices in Ottawa, with his salary and benefits fully contributed by CIDA until March 1997. After this time, it is anticipated that his costs will be supported by other projects carried out by OCEEI. Should no further projects come on line by March, however, Mr. Guilmette will leave OCEEI as of 1 April; funds have been budgeted to carry a part-time supervisor for EMDU through the end of the project.

Administration [1120] — If, as foreseen, OCEEI takes on other projects, new administration policies will come into effect, improving on the shortcomings learned from EMDU. No changes are foreseen in the administration of EMDU through its termination.

Like the case with Mr. Guilmette, the Senior Scientific Advisor and Kyiv Office Director will leave the project on 1 April if no new funding is secured. The Program Officers, Office Administrator, and remaining Kyiv staff will stay on through the end of the project with other part-time assistance from within IDRC budgeted to close the project in the worse-case scenario.

IDRC Management Committee [1130] — The next meeting of the IDRC Management Committee will take place in the spring as a prelude to the end-of-project conference, slated for June 1997.

Steering Committee [1140] — The next Steering Committee meeting will take place in March 1997.

MEPNS Management [1200]

Ukrainian Management Committee [1210] — It is expected that UMC will remain proactive and maintain ownership of the project. The biggest task will be ensuring that the flow of funds will resume.

With the changes in the EMIS activities, 3 proposals are expected soon.

The end-of-project conference will serve as the final Joint Management Committee meeting.

4.2 Technical Assistance [2000]

Project Development [2010] — The Program Officer for EMIS will oversee the project proposal completion for the remaining EMIS activities on his trip to Kyiv in late February. Only one other proposal, the *Environmental Curriculum in Schools*, is expected this semester outside the EMIS group of activities.

Activity Monitoring [2020] — Program Officers will continue exercising quality control on all reports and track their timely deliveries. The Kyiv Technical Liaison Officer will assist in this area.

We will continue the tracking of women's involvement, mainly through the gender reports required at the end of each current project.

Field Coordination [2030] — The roles for ongoing Kyiv staff are solidified and should not change through the end of the project. New staff will become familiar with EMDU and their duties.

4.3 Research and Development Activities [9000]

Environmental Management Capacity Building [9100]

Human Resources Development [9110]

Management Skills and Infrastructure Development [9111] — No further action required.

Training Plan and Gender Strategy Development [9114] — IDRC has been informed that final comments by UMC on the consultants' reports will be forthcoming early in the new year.

Environmental Management Information System [9120]

Data Collection/Monitoring System Development [9123] — Final payment can be made when the presidential decree is lifted, bringing this activity to a close.

EMIS for the Dnipro Department [9126] — Once funds can be moved into Ukraine again, IDRC will proceed with the purchase of computer-related materials for MEPNS, as per UMC's request regarding leftover funds from Phase I.

Work will proceed with Phase II, the national centre in Kyiv. The Program Officer will travel to Kyiv in late February to assess where best to acquire the necessary equipment. Following the hardware and software purchase, end-users will be trained in its use and sample applications and data bases installed and tested. Work is scheduled to finish in April.

One problem identified from activity 9123 is the need for high-resolution digital maps. These will be purchased as part of the work on the Kyiv centre EMIS. Computer modeling and remote sensing applications will also be incorporated into the Kyiv centre.

The previously designated Phase III will be moved to a second phase of 9127, below, as the logical follow-up to work already done in Zaporizhzhia.

Zaporizhzhia REMIS (Regional Environmental Management Information System) [9127] — Following receipt and approval of final technical and financial reports, which are expected by early February, IDRC can make final payment and close this activity.

The Zaporizhzhia pilot centre will be adapted into a turnkey system that can be replicated in activities following EMDU at other regional centres at mid and upper-Dnipro sites, where local data bases will be set up. The IDRC Program Officer will review the proposal in Kyiv in late February. Work will proceed in tandem with Phase II of 9126-2, with integration and completion of the two activities in the summer.

Policy and Public Education [9130]

Environment and Water Management [9131] — Dr. Shevchuk intends to have the book used as a manual in Ukrainian universities. IDRC is awaiting an English abstract of the book. Following receipt and approval of the abstract, this activity will be closed.

Public Education [9132] — Proposal on *Environmental Curriculum in Schools* is awaited.

Initial payment for *Environmental Legislation Review* is pending. The work plan calls for a draft version of the legislation collection in early April, with final version due in July. In addition, short essays on topics of particular concern, for publication in newspapers, magazines, and for businesses, are envisioned throughout the activity's life span.

End-of-project Conference [9133] — IDRC expects to hold the conference in June. The preceding months will involve logistical arrangements and inviting participants. If NATO funds are not forthcoming, IDRC will make contingency plans for finding alternate moneys.

Trilateral Cooperation (GEF) [9134] — Dr. Jan Barica will be attending meetings with trilateral country scientists in Kyiv, Kharkiv and Moscow in January. At that time, they plan to finalize the reports from each of the countries and present the integrated report to the Coordinating Council and Task Force for final approval. If approved, this will be followed up by an edited English version to be prepared in Canada and submitted to the GEF for funding.

Health Risk Assessment [9137] — The first phase of the activity is to write a report on drinking water quality of the Dnipro and public health statistics for users of the water. This will be followed by reports on links between contaminants and health. The final report will make recommendations to policy makers on what public health measures can be taken and what results are likely to be.

Education through the Media [9139] — The third video, on Dnipro tributaries, is expected in January. It is scheduled for broadcast in Ukraine on the national television channel, TV-1, at the end of the month. The fourth and fifth videos are expected by the end of May.

IDRC expects the print-ready layout with English and Ukrainian text within a few weeks of the release of funds for the *Artery of Life* book. Following that, the book will be printed and distributed throughout Ukraine.

Water Pollution Control [9200]

Baseline Water Quality [9210]

Baseline Water Quality [9210] — Final reports are expected from three institutions in Ukraine on hydrology of the Zaporizhzhia region, chemical analysis of bottom sediments, and a water quality analysis. Approval of these reports will bring this activity to a close.

Water Quality Standards [9211] — Upon receipt of first payment, the Hydrobiology Institute will analyze water quality assessment methods in Ukraine, develop a uniform environmental evaluation procedure, and finally develop surface water quality standards for Ukraine.

Dr. Arkhipchuk from the Hydrobiology Institute will attend the Water Toxicology workshop in Canada in mid-January. He will present a report to UMC and IDRC on the workshop.

Environmental Audits [9220]

Audit Team [9222] — No further action is required.

Environmental Audits and Follow-up Technologies [9224] — Full testing of the anaerobic water treatment equipment will be carried out at the Yagotin sugar plant. In addition, the plant plans some non-capital-intensive work, like replacement of pumps that have failed to discharge water into settling ponds instead of directly into the local river. Plans for a computer-based management system are also underway at the sugar plant, as well as testing equipment to detect problems with storage tanks.

Other activities within DRF include testing and recommendations for making better use of recycled water, improved financial management of laboratories and a field trip to Lithuania to observe the use of plasma technology for possible incorporation into Ukrainian projects.

Green Technologies [9230]

Eastern Europe Review [9232] — Because of the confusion with report approval, the consultant will re-submit the report to the Senior Scientific Advisor and UMC, ending this activity.

Kyiv Trade Show [9233] — At last report, IBRD intends to hold the conference in April. Because of the numerous delays and changes in focus on the part of the World Bank, IDRC will make a decision in the coming weeks on whether to participate with IBRD or fund its own conference, likely with the participation of Industry Canada as originally envisioned.

Ramial Chipped Wood [9235] — With a few modifications, IDRC intends to approve the proposal. Work on the project will then get underway early in the spring with the first plantings of crops.

Shoreline Demonstration [9236] — IDRC expects to receive a progress report in January, which will fulfill requirements for phase I of the activity. The next step will be the finishing of the 3-kilometer shoreline demonstration area.

Municipal Water Pollution Control [9240]

Sewer and Tap Water Quality [9242] — The final report is expected by mid-spring, bringing this activity to a close.

Leak Detection and Water Treatment [9243] — Mr. Spaciuk, Director of Zaporizhzhia Vodokanal, will be presenting a progress report on these activities at the UMC meeting in February. Following approval, activities are complete.

In related areas, Mr. Myron Lahola will give a presentation on these activities at an Urban Water Supply Conference in Jaipur India in January. Zaporizhzhia Vodokanal will continue to gather information on water consumption for its data bases.

Section 5: Budget

See Appendix E for the financial report.

The following budget-related items are noteworthy:

- Moneys designated as commitments are those that have been approved but cannot be disbursed due to the Presidential decree, described in section 2.1.
- In October, CIDA agreed to amend the contribution agreement to IDRC by granting an additional \$450,000, bringing the total contribution to \$4,768,200.
- IDRC has been utilizing a rented apartment for staff visitors to Ukraine in order to keep down the high costs of travel.

In other cost-savings measures, IDRC is sharing space in its office, now dubbed Coop House, with other organizations in an attempt to recoup costs through shared equipment and personnel. Only two other organizations are currently sharing facilities: more have expressed interest, but IDRC's legal department is sorting out the legal questions before allowing more organizations to join Coop House.

- IDRC garnered the following external contributions over the last 6 months:
 - services of Mr. Myron Lahola for water sanitation work, paid by Aqualta in Edmonton, for the period July to December, valued at \$66,000
 - payment by CIDA of salary and benefits for the semester for Mr. Jean-H. Guilmette, valued at \$48,000 for July to December
 - payment of salary and benefits by Natural Resources Canada for Dr. Ken Babcock, valued at \$60,000 for the period July to December
 - donated consulting work on environmental health and safety for environmental audits performed by Mr. Ihor Ilnytskyi, Cargill Limited, valued at \$10,500 for 15 days of work
 - donated geological consulting work by Professor Frank Simpson, University of Windsor, for shoreline rehabilitation, valued at \$10,500 for 15 days of work

Total external contributions: \$ 195,000

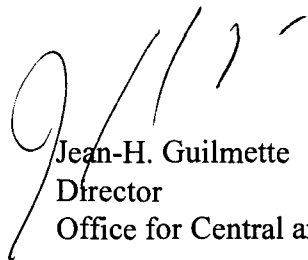
Section 6: Closure

The report presented herein covered the progress achieved during the last six months of 1996, identified outstanding issues that needed attention, described the actions taken and outlined a work plan for the first half of 1997. The report is the fruit of the entire IDRC Management Committee. Mr. Kerry Franchuk collated and edited all contributions.

The IDRC Management Committee for the project wishes to acknowledge the generous cooperation and assistance received from their Ukrainian colleagues and the Canadian International Development Agency.

Any inquiries can be directed to IDRC's Ottawa office at the address and telephone number given on the cover page of the report.

Respectfully submitted,



Jean-H. Guilmette
Director
Office for Central and Eastern Europe Initiatives

Appendix A

List of People Trained

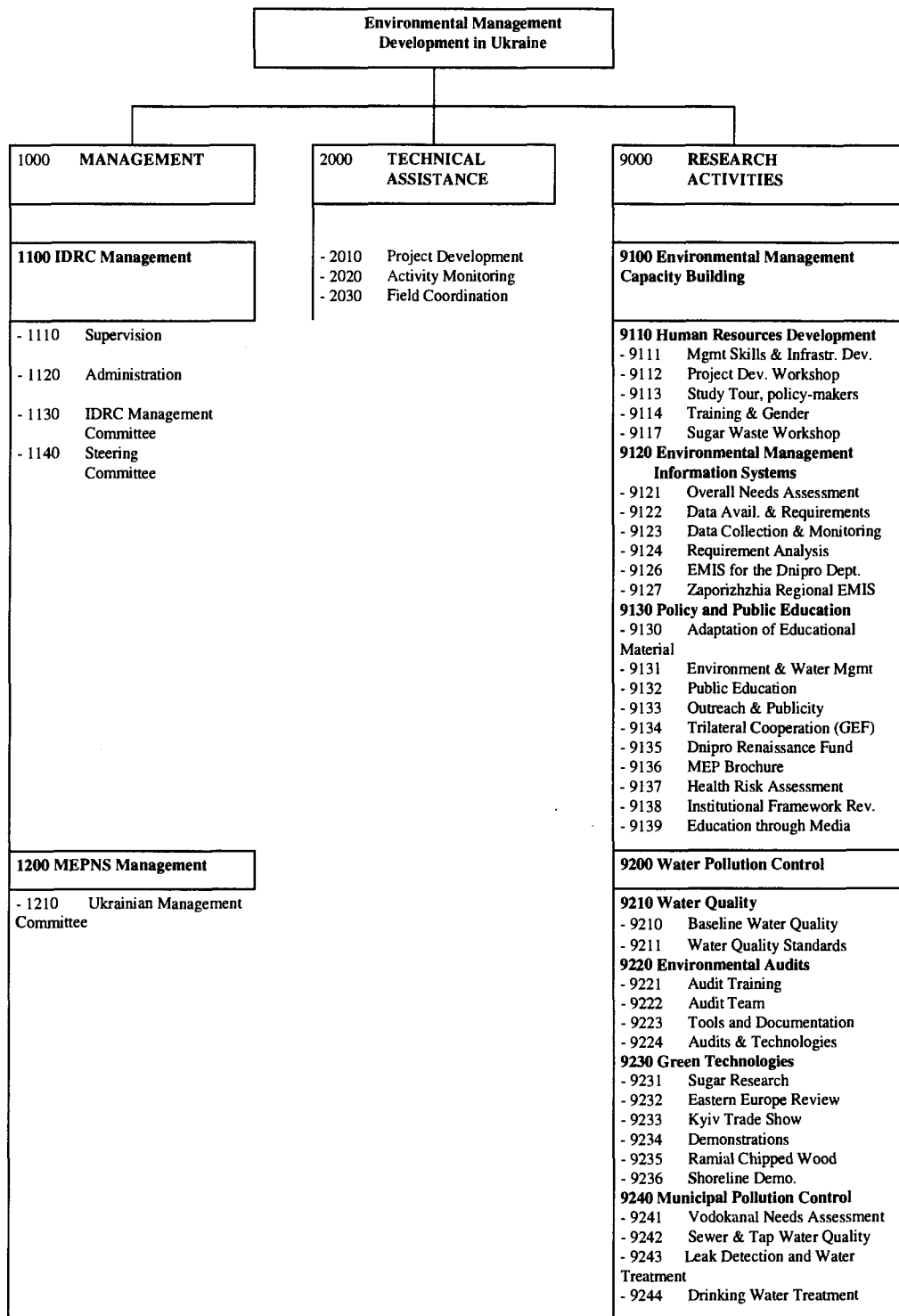
Table 3.1 Summary of EMDU-related training in the first six months of 1996

Name	M	F	Location	Training Institution	Type	Subject	Period	Duration (Days)
Dr. Oleksandr Kolodiaznyi	x		Netherlands, Germany	RISA Inst.	study tour	study of established EMISes	June-July	10
Dr. O. Kusin	x		Netherlands, Germany	RISA Inst.	study tour	study of established EMISes	June-July	10
Ms. Tatiana Pavlun		x	Canada	various/IDRC	practical	tour of related Canadian facilities	September	8
Mr. Yuriy Pavlun	x		Canada	various/IDRC	practical	tour of related Canadian facilities	September	8
Mr. Stanislav Potapenko	x		Netherlands	Paques Water Systems	practical	use of anaerobic biotechnology equipment	August	5
Mr. Volodymyr Potapenko	x		Netherlands	Paques Water Systems	practical	use of anaerobic biotechnology equipment	August	5
Dr. Oleksandr Trofimchuk	x		Netherlands, Germany	RISA Inst.	study tour	study of established EMISes	June-July	10

In addition to those named above, 6 Ukrainians visited Canada in late October for approximately 5 days as delegates of the Ukrainian Management Committee at the Joint Management Committee meeting. Although not a training tour per se, elements of the program involved informal training and there was a high degree of information exchange. All the delegates were male.

Appendix B

Work Breakdown Structure



Appendix C

Reports Available

C.1 IDRC Reports

OCEEI.01	EMDU Steering Committee	August 25, 1994
OCEEI.02	Trip report; Tom Bartos; Kyiv	April 18-29, 1994
OCEEI.03	Trip report; Tom Bartos; Kyiv	June 20-30, 1994
OCEEI.04	Trip report; Tom Bartos; Kharkiv-Kyiv	September 5-16, 1994
OCEEI.05	Trip report; Zbigniew Mikolajuk; Ukraine	October 23-29, 1994
OCEEI.06	Trip report #003; Doug Daniels; Ukraine	November 1994
OCEEI.07	Trip report; Zbigniew Mikolajuk; Ukraine	January 23-28, 1995
OCEEI.08	Trip report #001; Kerry Franchuk; Ukraine	March 6-14, 1995
OCEEI.09	Trip report; Zbigniew Mikolajuk; Ukraine	March 6-14, 1995
OCEEI.10	Trip report #002; Kerry Franchuk; Ukraine	May 14-25, 1995
OCEEI.11	EMDU Steering Committee	February 7, 1995
OCEEI.12	Report to the Ukrainian Management Committee	February 27, 1995
OCEEI.13	Trip report; Zbigniew Mikolajuk; Ukraine	June 27-30, 1995
OCEEI.14	Progress Report to the Department of External Affairs	

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- OCEEI.15 *Ukraine's Dnipro River: ENVIRONMENTAL ABUSE AND REHABILITATION*; James P. Hea; Ecodecision
- OCEEI.16 Financial Report to Sep. 30, 1995; Prepared by IDRC
- OCEEI.17d Joint Management Committee Meeting; Tues. 17 Oct. - Friday, 20 Oct. 1995
- OCEEI.18 May Monthly Highlights from Kyiv office; Prepared by Yarema Shulakewych, Project Coordinator, IDRC Kyiv
- OCEEI.19 June Monthly Highlights from Kyiv office; Prepared by Yarema Shulakewych, Project Coordinator, IDRC Kyiv
- OCEEI.20 July Monthly Highlights from Kyiv office; Prepared by Yarema Shulakewych, Project Coordinator, IDRC Kyiv
- OCEEI.21 August Monthly Highlights from Kyiv office; Prepared by Yarema Shulakewych, Project Coordinator, IDRC Kyiv
- OCEEI.22 Progress Report to the Canadian International Development Agency; 01 July - 31 December 1995
- OCEEI.23 Trip Report #96-002; James P. Hea; Jan. 26 - Feb. 2, 1996; Budapest
- OCEEI.24 September Monthly Highlights from Kyiv office; Prepared by Yarema Shulakewych, Project Coordinator, IDRC Kyiv
- OCEEI.25 October Monthly Highlights from Kyiv office; Prepared by Yarema Shulakewych, Project Coordinator, IDRC Kyiv
- OCEEI.26 November 1995 Monthly Highlights from Kyiv office; 96.03.15 - prepared by Yarema Shulakewych
- OCEEI.27 December 1995 Monthly Highlights from Kyiv office; prepared by Yarema Shulakewych
- OCEEI.28 January 1996 Monthly Highlights from Kyiv office; prepared by Yarema Shulakewych
- OCEEI.29 February 1996 Monthly Highlights from Kyiv office; Prepared by Yarema Shulakewych
- OCEEI.30 March 1996 Monthly Highlights from Kyiv office; prepared by Yarema Shulakewych
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- OCEEI.31 April 1996 Monthly Highlights from Kyiv office; 96.06.14 - prepared by Yarema Shulakewych
- OCEEI.32 May 1996 Monthly Highlights from Kyiv office; prepared by Yarema Shulakewych
- OCEEI.33 Progress Report to the Canadian International Development Agency; CIDA, *01 January - 30 June 1995*
- OCEEI.34 July 1996 Monthly Highlights from Kyiv office; 96.09.02 - prepared by Olena (Lesia) Rudenko
Electronic copy O-96-593 [k/o-475-kf,sd]
- OCEEI.35 June 1996 Monthly Highlights from Kyiv office; 96.06.14 - prepared by Olena (Lesia) Rudenko
Electronic copy O-96-528 [k/o-430-kf,sd]
- OCEEI.36 *Joint Management Committee Report on Third Meeting held 28-31 October 1996*; Prepared December 1996
- OCEEI.37 September 1996 Monthly Highlights from Kyiv office; 96.10.31 - prepared by Olena (Lesia) Rudenko
Electronic copy O-96-734 [k/o-583-kf,sd]
- OCEEI.38 October 1996 Monthly Highlights from Kyiv office; 96.12.04 - prepared by Olena (Lesia) Rudenko
Electronic copy O-96-802 [k/o-626-kf,sd]
- OCEEI.39 November 1996 Monthly Highlights from Kyiv office; 96.12.09 - prepared by Olena (Lesia) Rudenko
Electronic copy O-96-816 [k/o-635-kf,sd]
- OCEEI.40 December 1996 Monthly Highlights from Kyiv office; 96.01.24 - prepared by Olena (Lesia) Rudenko
Electronic copy k/o-31-kf,sd
- OCEEI.41 Financial Report to June 30, 1994; Prepared by IDRC; July 1994
- OCEEI.42 Financial Report to Dec. 31, 1995; Prepared by IDRC; Feb. 1, 1996
- OCEEI.43 Financial Report to Dec. 31, 1996; Prepared by IDRC; Feb. 19, 1997

C.2 Activity Reports

- AR.01 *Report on the IDRC Proposal Preparation Workshop at USCPW, Ukraine;* Draft by Alan Etherington, Cowater International Inc.; September 1994
- AR.02 *International Workshop on Efficiency and Waste Management in Beet Sugar Production;* trip report for attendance at conference held November 14 to 18, 1994; by Walter Epp
- AR.03 *The Dnipro Renaissance Foundation — Ukraine; Technical Assistance and Appraisal Report;* prepared by Nicholas Parker; 24 March 1995
- AR.04 *Zaporizhzhia — Municipal Water Pollution Control Study;* by Myron Lahola; file
- AR.05 *Report on Technical Visit to Ukraine in Support of the IDRC Project on Rehabilitation of the Dnipro River;* prepared by J. Marsalek; June 13, 1995
- AR.06 *Summary report for Ukrainian Environmental Audit Seminar and Agricultural Products Processing Industry Site Tours;* Ed Osborne, AGRA Earth & Environmental, 2 June 1995
- AR.07 *Complexive Study of the Dnieper Reservoir System, Water Masses and Bottom Sediment Contamination by the Heavy Metals, Radionuclides and Pesticides (Contribution of Ukrainian Hydrometeorological Institute to the joint Ukrainian-Canadian, stage-1994, expedition results);* Ukrainian version; Dr. Voitsekhovitch & Dr. Osadchiy; Kyiv 1995
- AR.08 *Workshop Documents — Developing Good Research Proposals;* Ukraine workshop September 1994
- AR.09 *Environmental Management Training Seminar Workbook for the Agriculture Products Processing Sector Ukraine;* by AGRA Earth & Environmental
- AR.10 Background reports in Ukrainian, used in the preparation of the final report for Overall Needs Assessment
- AR.11 *Report on Scientific Research Work, Assessment and Substantiation of Needs in Information System for Environmental Protection in the Dnieper Basin;* Final report for Overall Needs Assessment
- AR.12 *Examination of Water Quality in the Dnieper River Using Satellite Remote Sensing: Final Report;* by Dr. Gary Borstad

- AR.14 *Minutes of Steering Committee Meeting, February 7, 1995,*
prepared by R. Lothian
- AR.15 *Minutes of Steering Committee Meeting, August 25, 1994,*
prepared by R. Lothian
- AR.16 *Monitoring Report; Environmental Management Development in Ukraine
(EMDU) Program; April 1-September 30, 1994;* prepared by Rob Lothian
- AR.17 *Monitoring Report II; Environmental Management Development in
Ukraine (EMDU) Program; October 1-December 31, 1994,*
prepared by Rob Lothian
- AR.18 *Monitoring Report III; Environmental Management Development in
Ukraine (EMDU) Program; January 1-March 31, 1995,*
prepared by Rob Lothian
- AR.19 *Ukrainian Management Committee Minutes of June 30, 1995,*
submitted by Alexander Mazurkevich
- AR.20 *Baseline Survey 1994, Videocassette*
- AR.21 *Findings of the First Ukrainian-Canadian Expedition on Studying Current
Ecological State of the Dnipro River; Kharkiv-1995*
- AR.22 MEP Brochure in Ukrainian (green pages)
- AR.23 *Ukrainian Management Committee (UMC) Minutes of August 27, 1995;*
submitted by V. Shevchuk
- AR.24 *Monitoring Mission Report; EMDU Program; Nov. 7/95* prepared by
Program Monitor
- AR.25 *Monitoring Report V; Environmental Management Development in
Ukraine (EMDU) Program; July 1-Sept. 30, 1995;* prepared by Rob Lothian
- AR.26 *Objectif de la Mission;* report on meeting in Kiev; Nov. 28-30, 1995;
Paul Lanoie
- AR.27 ***Organic and Heavy Metal Contaminants in Fishes and Dated Sediment
Cores from the Dnieper River, 1994; A report prepared for the
International Development Research Centre; December 1, 1995;***
Department of Fisheries & Oceans, Winnipeg

- AR.28 *Minutes of Steering Committee Meeting, July 7, 1995*, prepared by R. Lothian
- AR.29 *Monitoring Report IV; Environmental Management Development in Ukraine (EMDU) Program; April 1-June 30, 1995*, prepared by Rob Lothian
- AR.30 Report on execution of project "*Creation of Preconditions for Development of Ecological Audit and Ecologically Safe Technologies in Ukraine*" (Dnipro river basin); Prepared by Dnipro Renaissance Fund
- AR.31 *Monitoring Report VI; Environmental Management Development in Ukraine (EMDU) Program; October 1-December 31, 1995*; prepared by Rob Lothian
- AR.32 *Needs Assessment Report for the Training Plan*; prepared by Lamoureux & Associates; January 7, 1996
- AR.33 *Gender Strategy*; prepared by Lenore Rogers and Svetlana Kupryashkina; December 1, 1995
- AR.34 *Gender and The Environment in Ukraine: An Initial Assessment*; prepared by Lenore Rogers and Svetlana Kupryashkina; December 19, 1995
- AR.35 *Training Plan*; prepared by Lamoureux & Associates; January 7, 1996
- AR.36 *EMDU TRAINING PLAN / Individuals Interviewed - By Organization*; prepared by Lamoureux & Associates; January 8, 1996
- AR.37 *Workshop on Dnipro River Basin Environmental Management Information System*; Budapest, February 1996; prepared by Vituki RT
- AR.38 *Status Report on SKE's Support Activities of the IDRC Remis Project. Period covered: August 1995 to February 1996*; Submitted by Spatial Knowledge Engineering Inc.
- AR.39 *Minutes of the UMC Meeting*; February 28, 1996
- AR.40 *Minutes of the UMC Meeting*; March 29, 1996
- AR.41 *Minutes of the UMC Meeting*; March 15, 1996
- AR.42 *Status Report on SKE's Support Activities of the IDRC REMIS Project; August 1995 - February 1996*; Submitted by Spatial Knowledge Engineering Inc.

- AR.43 *Monitoring Report VII; Environmental Management Development in Ukraine (EMDU) Program; January 1-March 31, 1996; prepared by Rob Lothian*
- AR.44 *Technical Report on Accomplishment of Contract N 9130; V.L. Maximchouk; 11-03-96 (English + Ukrainian)*
- AR.45 *Information Report; approved by Director of Ukrainian Hydrometeorological Institute Professor V. Volushchuk (Ukrainian only)*
- AR.46 *SCWR Report; (Department for Radiological and Hydrochemical Monitoring); December 1995; (Ukrainian only)*
- AR.47 *ICWC Monitoring Report; (Ukrainian only) (with covering letter, in Ukrainian, to Shevchuk from Spasiuk)*
- AR.48 *REVISION OF Findings of the First Ukrainian-Canadian Expedition on Studying Current Ecological State of the Dnipro River; Kharkiv-1995*
- AR.49 *Annual Comprehensive Review; Environmental Management Development in Ukraine (EMDU) Program; April 1, 1995 - March 31, 1996; submitted by Rob Lothian, May 29, 1996*
- AR.50 *Minutes of the UMC Meeting; April 29, 1996*
- AR.51 *Progress Report (Ukrainian only) from USCPW in fulfilment of 1st Milestone + 2nd payment*
- AR.52 *Dnipro GIS Pilot Project; Trip Report; April 15-18, 1996 by Stefan Palko*
- AR.53 *Progress Report: lists 5 components; March 29, 1995*
- AR.54 *Interim Report; Sewer and Tap Water Survey, KIIĬB-1996 (Ukrainian only)*
- AR.55 *Minutes of the UMC Meeting; May 31, 1996*
- AR.56 *Monitoring Mission; June 18 to 28, 1996; submitted by Rob Lothian*
- AR.57 *Minutes of the Steering Committee Meeting; Feb. 22, 1996 submitted by danielle Rondeau*
- AR.58 *Progress Report on Stages 1-5; April 24, 1996 (Report in English + Ukrainian + background documents in Ukrainian only)*

- AR.59 *Monthly Report*; June 1996, by Myron Lahola
- AR.60 *Minutes of Steering Committee Meeting, July 12, 1996*; prepared by R. Lothian
- AR.61 *Efficiency and Waste Management in Beet Sugar Production*;
Poceedings of International Workshop held in Kyiv November 14-18, 1994
(Bilingual publication: Ukrainian/English)
- AR.62 *Monthly Report*; July/August 1996, by Myron Lahola
- AR.63 Dnipro GIS pilot project; Final Report;
#4/6-08 of 14-Aug-96 (Ukrainian *only*) plus 2 disks
- AR.64 *Monitoring Report VIII; Environmental Management
Development in Ukraine (EMDU) Program*;
April 1-June 30, 1996; submitted by Rob Lothian
- AR.65 *Notes on the Trip to Ukraine*; 7 August 1996;
Prepared by Ed Osborne, AGRA Earth & Environmental
- AR.66 *Status Report on SKE's Support Activities of the IDRC REMIS Project*;
March 1 to June 30, 1996; Submitted by Spatial Knowledge Engineering Inc.
- AR.67 *Report on Training for the "Dnipro Water Quality
Environmental Management System" Project Staff*;
Approved by the Director of Ecocentre, Zaporizhzhia, V. Golovin
(English + Ukrainian)
- AR.68 *Report on Women Participation in the "Dnipro Water Quality
Environmental Management System" Project*; Approved by the
Director of Ecocentre, Zaporizhzhia, V. Golovin
(English + Ukrainian)
- AR.69 *Minutes of the UMC Meeting*; July 26, 1996
- AR.70 *River Bank Stabilization/Ukraine: Erosion Processes,
Remediation Measures and Socio-Economic Impact*;
F. Simpson; 25 September 1996
- AR.71 *Trip Report of D.R. Cressman* Aug. 20-30/96
- AR.72 *Monitoring Mission Report*; Sept. 7 to 16, 1996; submitted by Rob Lothian
- AR.73 *Minutes of the UMC Meeting*; September 27, 1996
- AR.74 *Interim Report* for the first stage (in English + Ukrainian)

- AR.75 *Creamery Conclusions and Recommendations*; from Mr.Satalkin
- AR.76 *Monthly Report*; September/October 1996, by Myron Lahola
- AR.77 *Environmental Audit Reports for the Popivka Distillery Kremenchug Dairy and the Cherkassy Meat Processing Plants - Ukraine*; submitted by AGRA Earth & Environmental Earth & Environmental Limited; December 1996; 00869
- AR.78 *Monitoring Report IX; Environmental Management Development in Ukraine (EMDU) Program*; July 1-Sept. 30, 1996; submitted by Rob Lothian, Dec. 12/96
- AR.79 *Status Report on SKE's Support Activities of the IDRC REMIS Project; Period Covered: July to December 1996*; submitted by Spatial Knowledge Engineering Inc.; January 2, 1997
- AR.80 *River Bank Stabilization/Ukraine: Preliminary Phase-1 Review with Notes on River Processes at Stabilization Site*; F. Simpson; 18 December 1996
- AR.81 *Jagotin Sugar Plant Audit*; December, 1996; CC00943
Prepared by Ed Osborne, AGRA Earth & Environmental
- AR.82 *Monthly Report*; November/December 1996, by Myron Lahola

Appendix D

Logical Framework Analysis

Approved 1-xi-95; to be updated periodically during project.

Narrative Summary	Sustainable Results	Verifiable Indicators	Means of Verification	Risk Analysis (Important Assumptions)																				
<p>Project Goals</p> <p>Contribute to the environmental rehabilitation of the Dnipro River system through the collaborative efforts of Ukrainian and Canadian organizations</p>	<p>Long-Term Impact</p> <p>Increased MEPNS ability to coordinate and influence the management of water resources and improvement of environmental conditions of the Dnipro River Basin, as well as to call on domestic and international institutions for research or financial inputs.</p>	<p>Water quality improvements</p> <p>River sediment contaminant reduction</p> <p>Reduced fish toxicity</p> <p>Increase in external funding and scientific exchanges</p> <p>Better integration of research results</p>	<p>National <i>State-of-Environment</i> surveys</p> <p>Scientific literature review</p> <p>Review of funding from outside MEPNS and USCWR</p> <p>Assessment of mechanisms which allow the incorporation of scientific research results into rehabilitation programs</p>	<p>Ukrainian partners coordinate IDRC activities with their own and those supported by other donors</p> <p>MEPNS is the key administrator of basin rehabilitation programs</p>																				
<p>Project Purpose (Objectives)</p> <p>To strengthen the capacity of Ukrainian institutions to manage the Dnipro River system, particularly its water quality</p> <p>To identify the means of reducing water pollution in the Dnipro River, specifically in Zaporizhzhia Region</p> <p>To foster long-term collaborative links between Canadian and Ukrainian public and private sector environmental organizations</p> <p>To encourage the exchange of information and experience between Ukrainian scientists and policy-makers and between these two groups and their counterparts elsewhere</p>	<p>Short-Term Impacts</p> <p>Focus on essential data acquisition relating to chemical and biological pollution of Dnipro River ecosystem</p> <p>Change of focus from water utilization to the supply of quality water (for the population and economy)</p> <p>Adoption of a green technology in at least one factory.</p> <p>Zaporizhzhia becomes a show case for water conservancy and effluent control</p> <p>Establishment of a dialogue between MEPNS and all water users (particularly agro-industries, light industries and municipalities)</p> <p>Establishment of new contacts between Ukrainian scientists and international scientists and specialists on environmental issues</p>	<p>At least 100 trained key scientists, managers and inspectors</p> <p>Existence of a Remedial Action Plan</p> <p>Factories, ENGO's and ECBO's involved in remedial action with MEPNS</p> <p>New environmental laws and regulations</p> <p>Value of fines levied</p> <p>Use of national resources to environmental rehabilitation</p> <p>Adoption and full-scale implementation of successful pilot studies, or dissemination of the reasons for pilot failures</p> <p>Non-project activities between Canadian and Ukrainian institutions</p> <p>Scientific and policy papers and meetings derived from project</p>	<p>Targetted surveys and statistics</p> <p>National gazettes</p> <p>National and local budgets</p> <p>Follow-up of Canadian partners</p> <p>Internet traffic</p> <p>Literature review</p>	<p>MEPNS has a national environmental mandate*</p> <p>Some 20 agencies and committees play various roles in the management of water and aquatic resources in the Dnipro Basin</p> <p>Canadian institutions will enter long-term relationships with their Ukrainian counterparts</p>																				
<p>Outputs</p> <p>Environmental management information system c/w database for one oblast and personnel trained to operate it</p> <p>Decision-support system for water quality management and personnel trained to use it</p> <p>At least 2 persons per ENGO trained in advocacy and watch-dog roles</p> <p>Policy on water tariffing</p> <p>Preliminary water conservation strategy for Zaporizhzhia</p> <p>4 green technologies introduced in Ukraine</p> <p>Preliminary Remedial Action Plan</p> <p>Directory-brochure of MEPNS</p>	<p>Outcomes</p> <p>Stronger MEPNS and USCPW</p> <p>Greater public awareness of environmental issues</p> <p>Long-term links with Canadians</p> <p>Exchanges between policy-makers and scientists</p> <p>Exchanges between Ukraine and other countries</p> <p>Internationally-recognized calibration of water-testing laboratories (USCPW, IC-CWC & Hydromet)</p>	<p>Greater public participation in ENGOs</p> <p>Operational environmental data gathering and compilation centre</p> <p>Operational decision-support system useful to MEPNS</p> <p>Report on preliminary strategy accepted by Zaporizhzhia Vodokanal and municipal authorities</p> <p>4 operational pilot plants</p> <p>Self-supporting environmental audit team</p> <p>Database on Dnipro-related activities</p> <p>Level of scientific input into policy-making</p> <p>Level of exchanges with other countries (number of visits, correspondence, etc.)</p> <p>Directory-brochure</p>	<p>ENGO activities</p> <p>Activity reports</p> <p>Independent and expert evaluation</p> <p>Field interviews and audits</p> <p>Continued existence, earnings of audit team</p> <p>Database printouts</p> <p>Assessment of MEPNS' organization</p> <p>International certification of lab proficiency</p>	<p>Sustainability and viability of the output will be addressed in their formative stages</p> <p>Training needs are identified and fulfilled for each activity</p> <p>Gender roles are understood and considered in each activity.</p>																				
<p>Inputs</p> <p>4 IDRC professionals</p> <p>\$4.3 M from CIDA</p> <p>\$2.15 M from external resources</p> <p>\$2 M? from MEPNS & USCWR</p> <p>Institutional collaboration from Canada</p>	<p>Cash-flow Projections</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>A&M</th> <th>TA</th> <th>R&D</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td><i>Year I:</i></td> <td>\$0.14 M</td> <td>\$0.26 M</td> <td>\$0.52 M</td> </tr> <tr> <td><i>Year II:</i></td> <td>\$0.23 M</td> <td>\$0.42 M</td> <td>\$1.35 M</td> </tr> <tr> <td><i>Year III:</i></td> <td>\$0.18 M</td> <td>\$0.22 M</td> <td>\$1.00 M</td> </tr> <tr> <td>TOTAL</td> <td>\$0.55 M</td> <td>\$0.90 M</td> <td>\$2.87 M</td> </tr> </tbody> </table>			A&M	TA	R&D	TOTAL	<i>Year I:</i>	\$0.14 M	\$0.26 M	\$0.52 M	<i>Year II:</i>	\$0.23 M	\$0.42 M	\$1.35 M	<i>Year III:</i>	\$0.18 M	\$0.22 M	\$1.00 M	TOTAL	\$0.55 M	\$0.90 M	\$2.87 M	<p>Reviewed and approved by Joint Management Committee members:</p> <p>18 October 1995</p>
A&M	TA	R&D	TOTAL																					
<i>Year I:</i>	\$0.14 M	\$0.26 M	\$0.52 M																					
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MEPNS = Ministry of Environmental Protection and Nuclear Safety
 USCWH = Ukrainian State Committee on Water Husbandry

Appendix E

Financial Data

Management and Technical Assistance

	EXPENDITURES				COMMITMENTS		PROJECTIONS				TOTAL	
	Total Expenditures to 96-06-30	Quarterly Expenditures 96-07-01 to 96-09-30	Quarterly Expenditures 96-10-01 to 96-12-31	Total Expenditures to 96-09-30	Through 96-12-31	Quarterly Projections 97-01-01 to 97-03-31	Quarterly Projections 97-04-01 to 97-06-30	Quarterly Projections 97-07-01 to 97-09-30	Total Projections	Expenditures + Commitments	Expenditures + Commitments	
		96-09-30	96-12-31	0	97-01-01 to 97-03-31	97-04-01 to 97-06-30	97-07-01 to 97-09-30					
Management												
401-0000	103,245	8,162	7,485	118,892		7,639	10,364	1,442	19,445		138,337	
	15,379	1,292	1,258	17,929		1,299	1,762	245	3,306		21,235	
	118,624	9,454	8,743	136,821	0	8,937	12,126	1,688	22,751		159,572	
Sub-total:												
Technical Assistance												
401-0000	209,619	16,325	15,444	241,388		15,277	20,728	2,885	38,890		280,278	
	31,225	2,583	2,597	36,405		2,597	3,524	490	6,611		43,016	
408-0000	26,300	6,125	0	32,425		1,000	1,000	1,000	3,000		35,425	
425-0000	125,659	2,826	6,366	134,851		0	15,000		15,000		149,851	
426-0000	8,634	1,963	3,683	14,280		2,023	2,023		4,046		18,326	
449-9001	21,145	493	629	22,267		2,750	2,750		5,500		27,767	
	12,000		0	12,000					0		12,000	
444-0000	250,117	3,074	0	253,191		21,000	3,150		24,150		277,341	
421-0000	6,362		0	6,362		0	0		0		6,362	
449-9002	80,441	19,900	29,827	130,168	2,024	14,851	14,851	2,228	31,930		164,122	
	771,502	53,289	58,546	883,337	2,024	59,498	63,026	6,603	129,127		1,014,488	
Sub-total:												
Total Mgmt. & T.A.	890,126	62,743	67,289	1,020,158	2,024	68,436	75,152	8,290	151,878		1,174,060	

Administration Fee

	EXPENDITURES			COMMITMENTS	PROJECTIONS			TOTAL	
	Total Expenditures to 96-06-30	Quarterly Expenditures 96-07-01 to 96-09-30	Quarterly Expenditures 96-10-01 to 96-12-31		Total Expenditures to 96-09-30	Through 96-12-31	Quarterly Projections 97-01-01 to 97-03-31		Quarterly Projections 97-04-01 to 97-06-30
Total Administration Fee	246,992	30,454	20,595	12,883	53,094	57,860	7,414	118,368	429,293

Grand Totals

	EXPENDITURES			COMMITMENTS		PROJECTIONS			TOTAL	
	Total Expenditures to 96-06-30	Quarterly Expenditures 96-07-01 to 96-09-30	Quarterly Expenditures 96-10-01 to 96-12-31	Total Expenditures to 96-09-30	Through 96-12-31	Quarterly Projections 97-01-01 to 97-03-31	Quarterly Projections 97-04-01 to 97-06-30	Quarterly Projections 97-07-01 to 97-09-30	Total Projections	Expenditures + Commitments
Total for Activities	1,579,798	241,799	138,661	1,960,258	126,809	462,500	503,450	65,850	1,031,800	3,118,867
Total for Mgmt. & T.A.	890,126	62,743	67,289	1,020,158	2,024	68,436	75,152	8,290	151,878	1,174,060
Total Administration Fee	246,992	30,454	20,595	298,042	12,883	53,094	57,860	7,414	118,368	429,293
GRAND TOTAL	2,716,916	334,996	226,545	3,278,458	141,716	584,029	636,462	81,554	1,302,045	4,722,219