Ministry of Education of Ukraine

Equal Access to Quality Education

Environmental Management Plan and Guidelines

June 18, 2004
Background.

The Government of Ukraine has requested Bank assistance to finance its education reform program through an Adjustable Program Loan of three phases. The proposed project (Equal Access to Quality Education Project) will be financed under APL 1 and will be implemented during four years. The proposed project responds to the Government request for Bank assistance to its education reform initiatives and, while the needs are pressing at many levels, it was agreed that the Bank support would focus on general education (grades 1 to 12), with special emphasis on rural schools. The development objective of the proposed project is to support Ukraine efforts to provide equal access to quality education and to improve the efficiency of the education system.

Project Description. It is envisaged that the project would consist of four basic components as follows:

Component I: Professional Development of Teachers and Principals

This component aims at raising the awareness, knowledge and professional competences of teachers and school directors in order to implement the reforms underway in teaching and learning in general education. This component would support the regional (oblast) teacher in-service training centers in providing professional development support to teachers in general education schools. The following activities would be financed by the project: (a) Training of trainers in the regional (oblast) in-service training centers and in the Central In-service Training Institute. (b) In-service training for teachers organized by the local (rayon) methodological centers. This training would be based on demand by the schools and the teachers and it would reach all schools during the project period. (c) Leadership training for school directors that would be coordinated centrally and implemented regionally. The interventions include updating of the existing school directors’ in-service training programs, provision of regional school leadership workshops for school directors based on the rayon request (and agreed clear criteria). (d) Support to good school improvement initiatives proposed by the rayons or schools. This would include additional professional development support, material supplies, or both, to those rayons and schools that have exceptionally interesting and innovative plans to promote equal access to quality education particularly in rural areas. The professional support including in-service training related to the school development plans would be provided as part of sub-component (b) above, and teaching and learning aids would be provided as described in Component II below.

Component II: Improvement of Conditions for Learning

The aim of this component is to support the ongoing efforts to improve the contexts of teaching and learning in secondary schools. On one hand this requires modernizing the curriculum content to provide teachers with opportunities to make use of new teaching methods, materials and tools. Improving conditions for learning also requires provision of
selected teaching and learning tools, reference materials for teachers and students, and computers for sharing resources, networking and processing knowledge. The interventions in this component would include: (a) setting up a collaboration and coordination system within the Regional Resource Centers using ICT for knowledge sharing. (b) Preparation on technical specification for teaching aids to be procured for the schools, and training regional experts to manage the distribution process. (c) Distribution of teaching aids together with appropriate training and advice for rayons and schools. (d) Support to the MES in realigning the curriculum, especially the content of those subject that are related to the new teaching aids.

Component III: Efficiency and Resource Utilization

The aim of this component is to improve the policy planning and management in central and local education administration by offering professional development support to the planning, policy and information management personnel, helping the MES to develop a policy for educational evaluation, and upgrading the function of the education management information system. In particular, this component aims at strengthening the policy capacity of the MES by providing support to the creation or development of a policy/monitoring unit at the MES. The component would include training MES officials in applying policy analysis and policy development methodologies and introducing these into the routine education strategy development, implementation and monitoring process. The project would assist MES in the development of a comprehensive and up-to-date information system for decision making. Local level capacities would also be strengthened via training and other support. This component also includes support for the Project Coordination Unit (PCU).

Component 3 complements the objective of the EAQEP to improve the conditions of learning in general secondary education schools by: contributing to the Government effort to increase student access, particularly to students from small/remote localities, to a more complete learning environment; and by helping Rayons realize greater efficiency and economies in the operation and maintenance of their educational facilities. The Sub-component objectives would be achieved by supporting the implementation of a selected number of ROPs, and by supporting priority school building rehabilitation investments in the most needy general secondary education schools.

(a) Sub-component 3.3 – Optimization of General Secondary Schools Networks; and
(b) Sub-component 3.4 – School Rehabilitation

Sub-component 3.3 Optimization of General Secondary Schools Networks.

Under APL 1, Sub-component 3.3 will finance the implementation of a selected number of Rayon Optimization Plans (ROP) which would serve as pilot models for subsequent similar investments under APL 2 and 3. The pilot ROPs would be selected according to criteria agreed with the Bank. The selected ROPs would be those that best demonstrate viable approaches to improve the Rayon school network's efficiency and effectiveness in providing quality teaching and learning opportunities to students at all general secondary education levels within the Rayon, particularly to students from the Rayon's smaller and more disadvantaged localities. The sub-component will also provide better opportunities for
teachers to improve their competencies and skills by widening the opportunity for teachers to interact with their peers in larger schools and to access pedagogical resources and facilities not otherwise available in small schools. The activities under Sub-component 3.3 would be implemented in two stages:

Stage 1 - Preparation of Rayon Schools Network Optimization Plans and Programs.

The PHRD Grant (TF 051136) financed consultant services that assisted MES review and refine the current school networks optimization policy and its implementation strategy. These refined policy and strategy will govern the implementation of project-supported investments in school networks optimization; the activities and interventions supported by APL 1 under Stage 1 are the following:

(a) Preparation of an Optimization Technical Manual (OTM) for the design and Implementation of ROPs. The services of foreign and local experts would be recruited to assist MES develop the OTM. In-country workshops, training, promotions activities and consultations with Oblast and Rayon education and other authorities and stakeholders to disseminate the OTM; and

(b) Support to Oblasts/Rayons in the preparation of ROPs. The PHRD Grant also financed consultant services that assisted MES to identify viable investment options and measures that would help to achieve the optimization goals. The options include priority investments to improve educational quality, effectiveness and facilitate the networking of general secondary schools within in the Rayon, among others:

(i) Upgrading of secondary school buildings in the Rayon network. The primary goal of such investments should be to provide adequate physical environments for learning and teaching in the Rayon schools network for the affected students and teachers.

(ii) Organizing a system of feeder and central schools served by school buses.

(iii) Provision of essential supplementary teaching materials and school equipment

(iv) Training and capacity building for the teachers and school personnel in the Rayon school network.

(v) Other essential interventions/investments identified in the ROPs, agreed upon following consultations between MES and the Bank.

Selection of Pilot ROPs. Using the selection criteria and procedures prepared with the PHRD Grant support, MES would select about ten ROPs which are deemed the most viable and likely to be implemented and completed successfully during APL 1. The MES would organize an independent ROP Selection Committee to review proposals, and recommend the selection of about ten ROPs for pilots. The ROPs under consideration should have been subjected to extensive consultations among the stakeholders and have obtained their unanimous endorsement. The screening and selection of the pilot ROPs would be undertaken in accordance with agreed
selection and prioritization criteria and methodology and consulted with the Bank. The final selection of ROPs to be piloted would be cleared with MES and the Bank.

**Stage 1 Activities/Inputs to be Financed by the Project.** Under Stage 1, the EAQEP would finance the following project-related investments/expenditures:

(i) Services of local and international experts for:
   - The development of an Optimization Technical Manual (OTM)
   - Organizing workshops and training to build capacity in the MES, Oblasts and Rayons to develop viable ROPs;

(ii) Printing and distribution of the OTM and other related technical and informative brochures

(iii) Implementation of a public information campaign on Optimization

(iv) In-country workshops and training; and

(v) Other related services and expenditures subsequently identified by MES and agreed with the Bank

**Stage 2 – Implementation of Pilot Rayon Optimization Plans.**

Stage 2 of Sub-component 3.3 would be implemented during years 3 to 4 of APL 1. Under Stage 2, the project would finance the set of investments described in the (ten) pilot ROPs which were selected under Stage 1 using the processes and in accordance with the parameters described above. The EAQEP would award an Optimization Grant to the Rayons that submitted the selected ROPs to finance the implementation of the investments described in these plans. APL I would finance consultant services to assist the selected Rayons finalize the details of their ROPs and present these in a form suitable for implementation.

**Stage 2 Activities/Inputs to be Financed by the Project.** The following ROP-related expenditures would be eligible for financing under APL 1:

(a) Local architectural/engineering consultant services to prepare detailed construction plans and technical specifications to upgrade/rehabilitate schools in the pilot networks and to supervise the construction works;

(b) Proposed optimization investments, including, as appropriate:

(i) **Upgrading of secondary school buildings** in the pilot Rayon network. In view of the limited funds available for the project, the financing of school upgrading and rehabilitation in the selected Rayon networks would be limited to the following types of facilities and works:

   • Rehabilitation of essential utilities in the school, such as: improvement of heating facilities; improvement of toilet and sanitation systems;
improvement of the schools' water supply; repair of damaged structures, roofs, doors and windows, etc; improvement of the schools' electrical and lighting system; and major building repairs to prevent further deterioration and improve student safety.

- Essential upgrading of existing academic and teaching spaces such as classrooms and lecture rooms, physics, chemistry and science laboratories; school libraries and teacher rooms.
- This subcomponent will not finance proposed investments to build or expand indoor or outdoor sports facilities and student boarding facilities, except, to repair serious structural defects in the building, if after detailed engineering assessment, such structural defects are found to pose imminent danger to students and other building occupants.

(ii) Organizing a system of feeder and central schools served by school buses. The project would finance the procurement of school buses, and the training of school bus drivers;

(iii) Staff training and capacity building for Rayon education and other personnel which are not covered by activities under Component 2;

(iv) Essential supplementary teaching materials and school equipment.

(c) Consultant services to assist MES evaluate the implementation experience and results of the pilot ROPs. The findings and recommendations of this evaluation would be disseminated after review by MES and other authorities involved in the project, and following consultations with the Bank.

Subcomponent 3.4 – School Rehabilitation.

The project would finance the rehabilitation and furnishing of a limited number of general education schools up to the appropriate standards for a more complete learning environment, with particular emphasis on achieving greater efficiency and economy in the maintenance and operation of the rehabilitated facilities. The scope of the rehabilitation work would be limited to address the most urgent needs, which include: roof repairs and correction of structural defects; improvement of heating facilities and insulation; provision of adequate water and sanitation; and improvement of electrical systems. Measures will be taken to ensure that the rehabilitation works meet health, safety and environmental standards (including, among others, the removal and disposal of dangerous/toxic materials such as asbestos). The proposals for rehabilitation and repair works will be reviewed and assessed by a technical team comprising MES and Oblast Education authorities for compliance with minimum norms. The eligible schools will be selected nationwide (or could be limited to selected Oblasts as an alternative), in accordance with agreed selection and prioritization criteria. The number of schools benefited is initially estimated at 600 (the final number of schools rehabilitated within the cost ceiling allocated under the project may eventually vary depending on actual conditions and needs).
The Sub-component will finance:

(a) Consultant architectural/engineering firms for the preparation of the detailed construction/school rehabilitation plans, specifications, bills of quantities and bidding documents for the selected schools. The project will also finance consultant engineering services to assist MES supervise the implementation of the rehabilitation works and ensure that quality standards are met.

(b) Rehabilitation of selected general education schools as described above.

(c) Consultant architectural services to assist MES upgrade and update the existing school design and construction standards. These standards would be reviewed by technical experts, including education specialists at the appropriate levels, in order to ensure that the updated norms that will meet the growing needs of Ukraine's education system, as well as economy, efficiency and optimum use of scarce resources for educational investments and the maintenance of the physical plant.

Sub-components 3.3 (Optimization) and 3.4 (School Rehabilitation have the potential for environmental impacts. Under these sub-components, the project will finance the rehabilitation of secondary schools. The specific locations and number of schools to be rehabilitated is still to be determined. Rehabilitation work would be limited in the scope of interventions (e.g. improvement of poor heating, sanitation, water and electrical systems, and critical repairs of structures, roofs, doors and windows). The size of contracts are expected to range between US$20,000 – US$100,000. Actual construction will likely to be started only in year two of project implementation. The Government has recruited a local consultant (architect) to assist in its work in identifying the needs and the possible environmental issues the project may face.

1. Purpose of the EMP Guidelines

The schools to be rehabilitated under APL 1 will not be identified until the project is under implementation. Therefore an environmental assessment can not be carried out at this time. The purpose of these Guidelines is to provide the Project Coordination Unit staff, local communities, implementing agencies, engineers, environmental consultants, contractors, and other related parties with a set of guidelines that will assist them in determining to what extent the rehabilitation and construction proposed to be financed will affect the environment. The Guidelines are designed to assist all those who are working on rehabilitation and construction projects to ensure that environmental concerns are duly incorporated in the project design and implementation. When it is determined necessary to have an environmental assessment for a subproject, the project environmental Guidelines outline the actions for conducting the assessment, including analysis of the construction of new schools. The project also has an environmental management plan which takes into account the government's regulations on environmental issues relating to construction. The plan brings together all other existing rules
and regulations stipulated by the government and outlines steps to monitor the implementation of the plan.

3. World Bank Safeguard Policies

All subprojects that will be financed by the Project have to be in compliance with local environmental rules and regulations, as well as with the environmental policies of the Bank. The Bank requires environmental assessment of the construction of new buildings and assessment and mitigation of environmental impacts of rehabilitation works. While it is not expected that these projects would trigger any safeguard other than OP 4.01 Environmental Assessment, a table of the ten safeguard policies is presented in Table 1. It is the responsibility of the government to ensure that these policies are not violated.

<table>
<thead>
<tr>
<th>Safeguard Policy</th>
<th>Brief Description</th>
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<tbody>
<tr>
<td>Environmental assessment (EA)</td>
<td>IDA financed projects must be environmentally sound and sustainable. Type and detail of EA dependent on nature, scale and potential environmental risks.</td>
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<tr>
<td>Natural habitat</td>
<td>The Bank supports the protection, maintenance and rehabilitation of natural habitats and does not support projects that involve the significant conversion or degradation of critical natural habitats.</td>
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<tr>
<td>Forestry</td>
<td>Policy relates to tropical moist forests.</td>
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<tr>
<td>Pest management</td>
<td>The IDA supports the use of biological or environmental control of pests and strategies that reduce the reliance on synthetic chemical pesticides. It supports integrated pest management and the safe use of agricultural pesticides.</td>
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<tr>
<td>Involuntary resettlement</td>
<td>People who have to be removed or who lose their livelihood as a result of the project must be resettled, compensated for all of their losses and they must be provided with a situation that is at least as good as the one from which they came.</td>
</tr>
<tr>
<td>Indigenous peoples</td>
<td>Local indigenous people or distinct groups who are marginalized in society who could be adversely affected by the project.</td>
</tr>
<tr>
<td>Cultural properties</td>
<td>The IDA supports the preservation of cultural properties which includes sites with archaeological, paleontological, historical, religious or unique natural values. It seeks to avoid impacts on such sites.</td>
</tr>
<tr>
<td>Dam safety</td>
<td>IDA financed new dams must be designed and built under the supervision of competent professionals. Dams over 15 meters in height are of concern particularly if there is a large flood handling requirement or the dam is in a zone of high seismicity and/or where foundations and other design features are complex.</td>
</tr>
<tr>
<td>Projects on international waterways</td>
<td>Any project that may affect the water quality or quantity of a waterway shared with other nations.</td>
</tr>
<tr>
<td>Projects in disputed areas</td>
<td>Projects in disputed areas could affect relations between the country within which the project is being developed and neighboring countries. Disputes would be dealt with at the earliest opportunity.</td>
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</table>

Note: For detailed explanation of each safeguard policy refer to the World Bank website, specifically, www.worldbank.org/environment/op_policies.htm
4. Related Environmental Regulations in Ukraine

Construction and rehabilitation of social buildings including educational institutions is regulated by State Construction Regulations and a number of Laws. According to State Construction Regulations, which are obligatory for everyone engaging in construction activities, the procedure of developing materials for different project activities should include an Evaluation of Environmental Impact (EEI) of the projected, establishing it as one of the main requirement of project documentation.

As stated the goal of EEI is to identify ecological impact of the project activities and methods of its realization, defining the ways and methods of normalization of the state of environment and compliance with the requirements of ecological safety.

EEI’s main tasks include:

- Creating specifications of ‘before-construction’ state of the territory and construction site;
- Creating a list of possible ecologically dangerous impacts;
- Influence of the projected activities on the environment;
- Identifying a number of measures to eliminate the impact of projected activities on the environment;
- Creating an Application on Ecological Consequences.

During the EEI development one must comply with the requirements of the Laws of Ukraine, particularly ‘Law on Environmental Protection’ and Law on Ecological Review’ and also legislation on land, water, forest, natural resources, protection of atmosphere, protection and use of plant and animal life, laws on basics of urban construction, ensuring satisfactory sanitation and epidemic state, local authorities, current construction regulations, sanitation rules and standards, hygiene, fire protection, local ecological conditions and limitations. Priority of EEI is determining ecological, social and economic conditions of and project consequences for the construction/renovation territory.

EEI development should be carried out by an organization, which is competent in this field and is licensed. The research is carried out by responsible state centralized and local authorities.

EEI should contain the following chapters:

- reasons for performing impact evaluation;
- geographical and climate characteristics of the site;
- general characteristics of projected construction/renovation objects;
- characteristics of local environment and evaluation of project impact;
- characteristics of local social environment and evaluation of project’s impact;
- measures to enforce appropriate state of local environment;
- complex evaluation of the overall impact of the project;
Following is a brief description of construction stages and respective measures of EEI:

1. Preparation of the basic material concerning the construction object, defining steps of a construction program and the needs for construction materials. A respective stage of EEI is preliminary evaluation of the project’s influence on the environment.
2. Locating an object on site (developing different variants of possible location, considering the ecological circumstances and engineering of the project). A respective stage of EEI is ‘Creating and Filling Application of Intended Construction’.
3. Formulating main tasks of projects’ feasibility analysis. EEI stage: ‘Formulating goals of EEI to be attached to the feasibility analysis materials’.
4. Performance of actual feasibility analysis in accordance with legal requirements and final decision on construction site location. EEI stage: ‘performance of evaluation included in analysis; creation of Application on Ecological Consequences’;
5. Adopting final feasibility analysis. EEI stage: ‘Ecological review of EEI materials; submission of the Application on Ecological Consequences’;
6. Finalizing the tasks of project development. EEI stage: ‘Updating the EEI’s tasks and development of EEI as part of the actual project in case of changes (e.g. location) in the feasibility analysis;
7. Developing the project materials in accordance with the laws mainly with respect to the amount and content of the project. EEI stage: ‘Changing EEI to accommodate possible changes in project tasks’;
8. Finalizing and adopting the project. EEI stage: ‘Ecological review of the updated and listed materials of the EEI’.
9. Development of documentation. EEI stage: ‘Specification of EEI if changes in planned construction technology or use of construction material have been made and such changes have a negative ecological impact’.
10. Exploitation of the project outcomes. EEI stage: ‘Evaluation of effectiveness of environmental measures included in the project’.

In accordance with the Cabinet of Ministers’ decree (revised version) from the 31st of October 1995 #870 “On the procedure of documents submission for state ecological review”, documents that are submitted for review must comply, as stated in article 15 of the “Law On Ecological Review”, with the requirements of:

- Ministry of Health Protection or its local branches (project approval to be obtained from State Sanitary and Hygienic Committee);
- State Committee on Labor Protection or its local branches (project approval to be obtained from State Labor Protection Committee);
- Department of State Fire Protection Department of the Ministry of Internal Affairs (experts’ conclusion on compliance of documentation with fire protection standards);

**Current Ukrainian Environmental Regulation Framework**

‘Contents of the Materials on Evaluation of Environmental Influences of Construction of Plants, Residential and other Buildings’ SCR A.2.2-1-95, State Committee on urban
construction and architecture, Ministry of Environmental Protection and Nuclear Safety, Kyiv 1996

'Regulations on decreasing the ionizing radiation of natural radio nuclides in construction. Main abstracts', SCR V.1.4-0.01-
'Regulation on decreasing the ionizing radiation of natural radio nuclides in construction’ Typical Documents. SCR V.1.4-0.02-97.

'Regulation on radiation parameters. Acceptable levels’ SCR V1.4-1.0.1-97

SCR V1.4-2.0.1-97 ‘Radiation control of construction materials and construction objects’

"Law on Ecological Review", adopted by Parliament’s resolution #46/95 – VR from 09.02.1995

‘Rules on Maintenance of Green Spaces in the cities and other settlements of Ukraine’ adopted by an order of State Residential Maintenance Service of Ukraine #70 from 29th of June 1994

Buildings and other Construction Units of Educational Institutions
SCR V.2.2-3-97 (concerning educational institutions), State committee on urban construction and architecture, Ministry of Environmental Protection and Nuclear Safety, Kyiv 1997

These laws and those related to construction of new buildings and rehabilitation should also be followed. The specifications for rehabilitation and construction will include directions on appropriate handling and disposal of and asbestos materials; mitigation measures for construction impacts including noise, removal and disposition of waste materials, and safety measures.

5. Proposed Project Activities

The project will support minor rehabilitation works in rural schools across Ukraine. The scope of the rehabilitation work would be limited to address the most urgent needs, which include: roof repairs and correction of structural defects; improvement of heating facilities and insulation; provision of adequate water and sanitation; and improvement of electrical systems. Measures will be taken to ensure that the rehabilitation works meet health, safety and environmental standards.

6. Situations that require project follow the Environmental Management Plan:

There will be no new construction of school buildings under the project, which will require an environmental assessment (EA).

Regarding rehabilitation of schools, the primary environmental concern relates to the possibility of asbestos material in the roofing of the schools. The utilization, storage, and disposal of asbestos sheets must all be considered. The following is a list of questions which,
if answered in the affirmative, would indicate that the safeguard policy OP 4.01 may be triggered and the strict adherence to the Environmental Management Plan may be required. The PCU would follow the same procedures as described above, in the event asbestos issues were raised.

Question: Will the project involve the use of asbestos corrugated roof sheet for all buildings, especially on school buildings, which would have impact on health and lung cancer (long term diagnosis)?

Question: Is the roof condition very bad on the site of the work? Are most of them broken? And are the broken parts spread over on the floor or attic?

Question: What are the ways for handling asbestos materials? Are they badly manipulated?

Question: When asbestos sheets produce dust when broken, do some people sometimes not handle the cut carefully?

Question: Do people use the replaced roof and reuse sheets (even broken sheets) on other buildings such as housing?

If there are significant issues listed under the questions outlined in Point 2 above, it would require strict adherence to the Environmental Management Plan

7. Steps in rehabilitation and construction subprojects environmental assessment

According to both government and internationally recognized regulations, at certain points of rehabilitation project preparation environmental assessment and monitoring are required. The steps during rehabilitation and construction are:

- Collect evidence that the proposed rehabilitation or construction project does not violate existing environmental regulations;
- Evaluate potential adverse environmental impacts;
- Highlight the need of specific prevention and/or mitigation measure;
- Make recommendations on the level of environmental efforts for next stage of project.
- Carry our desk environmental assessment using available documentation for the rehabilitation project (EA for construction would be more detailed as described previously);
- Visit the project site and carry on field preliminary environmental assessment;
- Analyze affected environment, potential impacts and recommend mitigation measures.

A Technical review would follow and include:

- Assess the affected environment;
- Investigate land use and resources use restrictions in the project area;
• Check that the rehabilitation project proposals comply with environmental laws and regulations;
• Estimate a range and a scale of potential environmental impacts;
• Recommend the needs for specific prevention and/or mitigation measures;
• Recommend the level of environmental assessment at the rehabilitation preparation stage;
• Assess the need and recommend the involvement of environmental consultant.

At the final review stage the PCU would:

• Check project design and other relevant documentation to make sure they have all the necessary permits and approvals and do not violate existing environmental regulations;
• In case of potential adverse environmental impact, check that appropriate prevention and mitigation measures have been planned and necessary resources have been allocated to implement them;
• Recommend on the level and mechanisms of environmental monitoring at further stages of the rehabilitation or construction project
• Visit the project site and carry out field assessment, including participation in public meetings, meet with implementing parties and technical teams if necessary;
• Compare results and recommendations of the preliminary environmental assessment with project documentation, ensure necessary environmental permits and approvals are in place.

8. Plans to ensure Environmental Management Plan is being followed:

• All rehabilitation and construction projects that will be implemented by the Oblasts and Rayons under the general oversight of the PCU, have to be in compliance with local environmental rules and regulations, as well as with environmental policy of the World Bank.

• Each rehabilitation project will be individually screened and reviewed by the PCU – by specific type – for any negative impacts, mitigations measures. The rehabilitation project proposal will incorporate an environmental review and the rehabilitation project appraisal document will include analysis, costs, and mitigation measures.

• When signing construction contracts, contractors should be asked to adhere to the environmental management plan and follow the proposed actions.

• The PCU will form a committee responsible for environmental monitoring. They will prepare a monitoring schedule and ensure implementation of mitigation measures and good practices.
• This committee will monitor project activities on a regular basis. When problems occur in the project, the committee will propose the solutions for the contractors to resolve the issues.

• There will be public participation and consultation with affected people and NGOs on the EA for construction and rehabilitation projects. There will also be disclosure of information to the public on the project and the construction work.

9. Institutional Strengthening for environmental management:

There will be organized training at the level of the Ministry of Education and Science for the PCU staff, Heads of Rayon Education Departments, as well as engineering units within Oblast Educational Departments, contractors, communities on variety of issues and application of environmental management plan and Guidelines. Specific training will be provided to technical specialists in the PCU to carry out the evaluation and monitoring of rehabilitation projects according to agreed environmental standards.
UKRAINE: EQUAL ACCESS TO QUALITY EDUCATION PROJECT

A. MITIGATION PLAN

<table>
<thead>
<tr>
<th>Phase</th>
<th>Issue</th>
<th>Mitigating Measure</th>
<th>Costs</th>
<th>Institutional Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of Rehabilitation plans and</td>
<td>Use of asbestos materials in building construction.</td>
<td>Ukraine’s State Construction Regulations make it obligatory to undertake an Evaluation of Environmental Impact (EEI) when specifying materials for construction projects. During development of the EEI, compliance with the Law of Environmental Protection and the Law on Ecological Review is mandatory. These laws adequately cover rules and standards concerning, sanitation, ecological protection, fire protection, etc. in construction. The management of chemicals, radioactive substances as well as asbestos are included in the Guidelines. The local authorities, schools, and contractors should follow these Guidelines where applicable. Ban use of asbestos sheets for roofing. Prohibit use of internal heat insulation using materials with asbestos/mineral fibers (provision must be written in technical specifications). Introduce other roofing materials such as ceramic tiles or corrugated (galvanized) metal sheeting into technical specifications of works contracts. Include recommendations for the handling and disposal of asbestos materials during construction in the technical specifications.</td>
<td>Install</td>
<td>Architectural engineering design firm</td>
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<tr>
<td>technical specifications</td>
<td></td>
<td></td>
<td>Operate</td>
<td>Architectural engineering design firm</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and PCU to ensure compliance</td>
</tr>
<tr>
<td>Roofing</td>
<td>Removal of asbestos materials during construction. Grand majority of flat horizontal roofs, built during the soviet era are leaking.</td>
<td>When replacing roof, use a different another type of roofing material such as corrugated iron sheets or ceramic tiles. (provisions for disposal of toxic construction wastes described below)</td>
<td>Air quality control during construction process including dust elimination by watering and other measures Schools must be closed during the period of roof reconstruction.</td>
<td>Various</td>
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<tr>
<td>Water supply, pipes repairs, sanitation, drainage, heating.</td>
<td>Most schools have inadequate sanitary conditions Due to the lack of funds, there were no repairs and all systems are out of order. There are rusted pipes and absence of water. Due to lack of water supply, the latrines, lavatories, and drainage are out of order.</td>
<td>The project will renovate some of the pipes, drainage, latrines in schools and provide clean water supply Drainage pipes/channels for used water (from lavatories) and waste/effluents from toilets, sewage and septic vaults will be separated.</td>
<td></td>
<td>Various</td>
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<tr>
<td>Heating and Insulation</td>
<td>Deteriorated or non-existent heating insulation in walls, windows and roofs. High heat losses due to construction flaws, faulty insulation of windows and walls. Absence of protection from winds.</td>
<td>Insulation of construction elements (including walls, windows and roofs). Reducing heat losses through placement of heated areas and buffer zones. Decreasing heat losses through ventilation by using controlled ventilation principles. Increasing heat preservation by planting trees and facade greenery, which also increases wind protection and heating insulation properties of a building.</td>
<td>Various</td>
<td>Various</td>
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<tr>
<td>Low energy efficiency of currently installed independent heating systems, resulting in large CO2 emissions. Insufficient insulation and operating efficiency of district heating systems.</td>
<td>Installation of highly efficient ‘low temperature’ boilers and heating system elements (replacing leaking radiators), which also reduce CO2 emissions.</td>
<td>Various</td>
<td>Various</td>
<td>Contractors</td>
</tr>
<tr>
<td>Water supply</td>
<td>Inefficient water supply systems and significant water losses due to poor condition of water supply system.</td>
<td>Installing water-efficient equipment to decrease water use. Promoting consciousness to decrease consumption and demand levels. Renovation of some water supply and drainage pipes where necessary.</td>
<td>Various</td>
<td>Various</td>
</tr>
<tr>
<td>Paints</td>
<td>Paints – walls and ceilings are painted with white wash. Wooden windows, exposed roofing timber, doors and all other woodwork was most probably painted with lead based paints</td>
<td>Bills of quantities will include a clause for appropriate disposal of painted wood. Procurement documents will specify that no lead based paints will be used</td>
<td>Minor costs</td>
<td>Minor costs</td>
</tr>
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</table>
Waste Disposal

Disposal of construction waste: **except for lead based paints, and asbestos roofing materials,** all other building materials are non-toxic (lime, cement and sand plaster, concrete, glass, ceramics -- electrical and sanitary, fabric insulated copper wiring, cast iron sanitary pipes, galvanized water pipes, etc).

The building site will be cleaned and all debris and waste materials will be disposed of in accordance with clauses specified in the bills of quantities. The sites for disposal of general, non-toxic construction waste will be government approved sites.

Disposal of lead-based paints and asbestos roofing and insulation materials will be in government approved sites and undertaken in accordance with Ukraine’s Environmental Protection Regulations.

Procedures for removal and disposal of such wastes will be appropriately described in construction bidding documents

<table>
<thead>
<tr>
<th>Minor costs</th>
<th>Minor costs</th>
<th>Contractor</th>
<th>Contractor</th>
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</thead>
<tbody>
<tr>
<td>Architectural /engineering design firm and PCU to ensure compliance</td>
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</table>
# B. MONITORING PLAN

<table>
<thead>
<tr>
<th>Phase</th>
<th>What parameter is to be monitored?</th>
<th>Where parameter to be monitored?</th>
<th>How is the parameter to be monitored/type of monitoring equipment?</th>
<th>When is the parameter to be monitored-frequency of measurement or continuous?</th>
<th>Cost</th>
<th>Institutional Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehabilitation</td>
<td>Existing school buildings to be rehabilitated should comply with environmental protection measures described in bidding documents</td>
<td>School sites in selected Rayons.</td>
<td>PCU will develop a site performance monitoring plan with regular visits to the rehabilitation sites. Projects overall performance will be monitored by central PCU having local agents in the form of regional branches of PCU. They will be assisted by Engineering Units in the Oblast Educational Departments. Ecological and environmental competence of the engineering units will be improved through guidance by appropriate professionals and training.</td>
<td>Annual monitoring throughout the project period.</td>
<td>N/A</td>
<td>Central PCU, branches in the regions and Oblasts’ engineering units within Education Departments, arch/engineering consultants in design and supervision and local Oblast Administration Environmental Department</td>
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<td></td>
<td></td>
<td></td>
<td>Central PCU, branches in the regions and Oblasts’ engineering units within Education Departments, arch/engineering consultants in design and supervision and local Oblast Administration Environmental Department</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>Appropriation and disposal of toxic and asbestos building materials. No lead based paint and asbestos roofing and insulation materials will be used during rehabilitation.</td>
<td>These clauses will be specified in the Bills of Quantities and in the bidding documents.</td>
<td>PCU will ensure that the site supervisors/supervision engineers enforce these clauses.</td>
<td>During the rehabilitation of project schools.</td>
<td>Minor cost</td>
<td>Minor cost</td>
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</table>
Institutional Measures

The architectural/construction project documentation will be prepared so as to comply with environmental protection laws, regulations, decrees and construction norms concerning building rehabilitation. The procedure requirements described in the introduction will be fulfilled and respective approvals will be obtained from the state committees.

Projects overall performance will be monitored by central PCU, having local agents in the form of regional branches of PCU. The branches will be responsible for complying with procedural requirements and obtaining state committee approvals of the rehabilitation projects. PCU branches will be assisted by engineering units in the Oblast Educational Departments. Ecological and environmental competence of the engineering units will be improved through technical guidance provided by appropriate professionals and through training. Public organizations will be encouraged to take an active part in monitoring project performance and will be engaged in public discussion of issues.

Some innovative approaches to energy management in school buildings would be considered for adoption under the project such as those currently being realized in Ukraine under a project involving 3 Oblasts with a vast network of schools. Energy management is performed by means of unique, locally developed software for collecting energy consumption data and generating reports on energy efficiency.
MINUTES
of Public consultations meeting on the EMP for the
“Equal Access to Quality Education” Project

June, 23, 2004

Pushcha Vodytsya

About 20 members of the Ukrainian School Head Association, mostly school
principles and educational specialists, from 7 oblasts of Ukraine took part in the
discussion of the Environmental Management Plan for the “Equal Access to Quality
Education” Project, which took place in Pushcha Vodytsya, suburb of Kyiv, on 22nd of

Participants of the conference were presented with a brief preamble to the
“EAQE” Project and an extensive introduction to the EMP Plan by GCU manager
Roman Shyyan. Every participant has a got a full printed copy of the EMP document
prepared by the PHRD consultant and revised by the WB consultant. Communication
and information consultant Dmytro Savytsky kept minutes of the discussion.

After presentation participants took part in the discussion, expressing their own
suggestions regarding various EM activities proposed in the document. A brief list of
the topics brought up during discussion is listed below.

1. Regarding the roofing and usage of toxic construction materials:
   - Most of the schools are slate roofed and therefore when putting new non-
asbestos roofs all children and personnel will have to be settled apart for a
certain amount of time. From the previous experience of several participants of
the discussion the school roof recovery usually lasts from 6 month to 2 years.
   - Fire prevention department requires all electrical power room to be isolated
with asbestos, which is now allowed according to the EMP. Heat pipes are
also usually isolated by the asbestos-containing materials. Problems with
requirements of different state departments are noted by most of the school
principles.
   - One of the requirements of the EMP is a usage of non-lead paint for the
school rehabilitation. Many school principles stated that there is a special
order which forces schools to buy and use paint produced in Ukraine, which
contains lead.

2. Regarding the water supply and other facilities
   - From the experience of the school principle from Cherkasy region there is a
large drinking water problem in some areas. In general there is no quality
clean water; the water processing technologies are outdated. Participant
referred to some project which has already taken place solving this problem and its experience could be used during the EM actions.

- Centralized heating system is not effective and too expensive, mini-boilers are needed. At the same time, modern boilers are very hard to maintain and require a different kind of piping. Heat insulation of pipes is required.
- All of the schools have lack of conditioning, ionizing and lightning equipment, which is particularly needed in the computer classes. Daylight lamps utilization issue is was also stressed by participants.

3. Capacity strengthening of responsible agencies/specialists

- Regional/local educational authorities engineering groups have lack of relevant competence. Their personnel should be renewed with relevant specialists and retrained.
- The existing system of obligatory training and certification of school principles in safety measures could be renewed and used for capacity building purposes.
- Participatory approach to the EM monitoring measures can me carried out through the involvement of the following entities:
  - Parental groups
  - School principles association
  - Territorial communities
  - Environmental NGOs

In general participants of the discussion have found proposed EMP relevant to the current circumstances in the field and acceptable.

List of Participants

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>Position</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Pavlyuchyk Olga</td>
<td>Deputy principal of school #68, Kryvyj Rih</td>
</tr>
<tr>
<td>2</td>
<td>Yermak Lyubov</td>
<td>Principal of school #34, Poltava</td>
</tr>
<tr>
<td>3</td>
<td>Sotsenko Oksana</td>
<td>Deputy principal of “Ukrainian school-gymnasium”</td>
</tr>
<tr>
<td>4</td>
<td>Palchenko Alla</td>
<td>Methodologist of educational management department, KMPU</td>
</tr>
<tr>
<td>5</td>
<td>Pobirchenko Neonila</td>
<td>Professor of National Academy of Ukraine, deputy head of psychology department</td>
</tr>
<tr>
<td>6</td>
<td>Skoryk Tetyana</td>
<td>Principal of school #28, Cherkasy</td>
</tr>
<tr>
<td>7</td>
<td>Lopushanska Galyna</td>
<td>Principal of gymnasium, Lviv</td>
</tr>
<tr>
<td>8</td>
<td>Kravets Olga</td>
<td>Principal of Starosilska school, Lviv oblast</td>
</tr>
<tr>
<td>9</td>
<td>Bychyshyn Myroslava</td>
<td>Principal of school #65, Lviv</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>Position</td>
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<tr>
<td>10</td>
<td>Kozina Iryna</td>
<td>Principal of lyceum of V.Molchanov, Vice president of USHA, Kyiv</td>
</tr>
<tr>
<td>11</td>
<td>Rudenko Maryna</td>
<td>Deputy principal of lyceum of V.Molchanov, Kyiv</td>
</tr>
<tr>
<td>12</td>
<td>Syerikova Zhanna</td>
<td>Deputy principal of school #16, Kramatorsk</td>
</tr>
<tr>
<td>13</td>
<td>Sarycheva Svitlana</td>
<td>Deputy principal of school #102, Kryvyj Rih</td>
</tr>
<tr>
<td>14</td>
<td>Turov Mykola</td>
<td>Research assistant of Pedagogy Institute of President Administration of Ukraine</td>
</tr>
<tr>
<td>15</td>
<td>Drozhzhyna Tetyana</td>
<td>Principal of lyceum #149, Kharkiv</td>
</tr>
<tr>
<td>16</td>
<td>Khovanova Olena</td>
<td>Principal of school #139, Kharkiv</td>
</tr>
<tr>
<td>17</td>
<td>Ostapchuk Olena</td>
<td>Senior lecturer, deputy principal of Saksahansky lyceum, Kryvyj Rih</td>
</tr>
<tr>
<td>18</td>
<td>Solohub Anatoliy</td>
<td>Principal of Saksahansky lyceum, Kryvyj Rih</td>
</tr>
<tr>
<td>19</td>
<td>Onats Olena</td>
<td>Principal of school #41, President of USHA, Kyiv</td>
</tr>
</tbody>
</table>