ENVIRONMENTAL MANAGEMENT PLAN

FOR

KYRGYZ HEALTH AND SOCIAL PROTECTION PROJECT
(in the context of Health SWAp)

September 2005
ENVIRONMENTAL MANAGEMENT PLAN FOR KYRGYZ HEALTH AND SOCIAL PROTECTION PROJECT

I. BACKGROUND

1.1 Introduction

The proposed project would be the Bank’s third project in the Kyrgyz health sector. The Health Sector Reform Project (P28600) ran from 1996 to 2001 and was rated highly satisfactory at completion. The Second Health Sector Reform Project (P051372) is implementing well and due to close in December 2005. Counterparts and the donor community view the Bank favorably. Health is a key goal of the National Poverty Reduction Strategy. Health policy issues have featured in the recent GSAC/GTAC operation and social protection policy issues feature prominently in the PRSG currently under preparation. The proposed operation is mentioned in the Kyrgyz Republic Country Assistance Strategy for 2003-2006 in paragraphs 51 and 58.

In spite of progress in health reform and major gains in the efficiency of sector performance, Kyrgyzstan remains a poor country with weak health indicators and a continued need for investment and reform in the health sector. Rationales for Bank involvement include its long experience in the country and the sector, its successful record of supporting health reform, its experience with sector-wide approaches in other countries and its ability to draw connections across multiple sectors and reform areas—including health, public financial management, civil service reform and fiduciary functions, among others—that are of particular relevance when moving toward a sector-wide approach. In Labor and Social Protection, the Bank has a long history of involvement in policy dialogue through development policy operations such as GSAC/GTAC and the proposed PRSG. The present operation would provide modest investment financing to help improve information systems in MOLSP and thus to improve the timeliness and accuracy of decisions concerning targeting of social assistance and SP policy more generally.

The project components are the following:


Component 2: Improving the Targeting of Social and Health Benefits (US$2 million).

The first Component (US$13 million) would support implementation of the Manas Taalimi Program of Work through a Sector-Wide Approach. Funds would be used to finance a combination of investment and recurrent expenditures for priority areas of Manas Taalimi not
financed by other donors—both for policy development and operational activities, and for both on-going service delivery and new initiatives. The basis for these decisions will include the Manas Taalimi Program of Work; detailed annual work programs, budgets and procurement plans; progress against agreed sector monitoring indicators including MTBF targets; and results of biannual “Health Summits” at which all these inputs will be discussed between the government and health donors.

1.2 Major Investment Components

The main, and only, physical investment component of the proposed project envisaged to be financed from IDA funds is the rehabilitation/renovation of a Ministry of Health building dedicated to administrative purposes. This investment is reflected in the Procurement Plan for the Project.

While the sector-wide approach to which this project will contribute also envisages other minor rehabilitation/renovation of existing selected FAPs, FGPs and SES facilities throughout the country, these investments are earmarked for funding from parallel donor contributions under the overall sector-wide program supporting implementation of the National Manas Taalimi health reform program, and do not involve the use of IDA funds.

1.3 Environmental Category

The only activity funded from IDA funds is the rehabilitation/renovation of a building of the Ministry of Health dedicated to administrative purposes. Therefore, the immediate impact on the environment would be limited. As this project will be implemented in the context of SWAp supporting the National Manas Taalimi health reform program, plans on minor rehabilitation of FAPs/FGPs and SES facilities are still considered in this EMP as they form part of the overall program to mitigate potential adverse environmental impacts resulting from the discrete activities financed by the program. These potential adverse environmental impacts are summarized below and are restricted in scope and severity:

- Dust and noise due to demolition and construction;
- Disposal of construction wastes;
- Risk from inadequate handling of hazardous wastewater, waste gases and spillage of hazardous material during operation of the building;
- Risk from inadequate handling of medical waste.

Risk from inadequate handling of medical waste has been considered as the currently ongoing activities on health care waste management in health sector are being supported by the Bank funded Health-2 project and are complementary to a Swiss-funded project in the health sector. The broader EMP encourages the application of international environmental standards in the health sector.

These risks can be effectively anticipated in advance of project implementation and addressed by direct mitigation activities in the design, planning and construction supervision process as well as during the operation of the facilities. The project is classified under the Environmental Category
B in accordance with World Bank operational policies and requires the preparation of an Environmental Management Plan (EMP).

1.4 Institutional and Implementation Arrangements

The First and Second Health Sector Reform Projects used a traditional project implementation structure with a stand-alone PIU. The Second Health Sector Reform Project divided fiduciary and administrative functions from technical functions by having two separate but related units: a PIU for the administrative and fiduciary work and a Technical Coordination Unit for component coordinators and technical issues. Under Manas Taalimi these functions will be integrated into the core MOH. Overall responsibility for program management and implementation for the Manas Taalimi program is with the Ministry of Health and its adjunct organizations at the national and regional levels. MOH has a supervisory role in relation to all health-related organizations regardless of ownership and administrative level in the country. In light of the currently ongoing restructuring of the Ministry of Health, a number of functional responsibilities for the eight components of Manas Taalimi have been identified, and will be allocated within appropriate organizational units in the Ministry of Health. Further refinement and streamlining of coordination responsibilities for each component will be agreed at appraisal, when the reorganization of the Ministry is expected to be finalized. The program itself will be implemented through existing structures and executing agencies of the Ministry of Health. The executing agency of the Bank’s support is MOH through its various administrative divisions and subdivisions. IDA funds will flow through the MOH.

1.5 Institutional Structure in Environment Management and Healthcare Facilities Planning

This section briefly describes existing environmental regulation and standards relevant to the project and makes reference to institutions at the local and national levels responsible for issuing permits, licenses, and enforcing compliance of environmental standards. Additional details on the environmental regulatory framework can be found in Attachment 1 (Review of the environmental laws and regulations).

The following Kyrgyz Laws and other normative documents define a legal framework which regulates the procedures of waste collection, temporary storage, disinfection and treatment:

- Law on waste of production and consumption, October 18, 2002.
- Law on radoactive safety of population, June 17, 1999.
- MoH’s Order #393, September 18, 2002 approving Targeted Program on HCWM and HAI.
• Directions on the Order of the Public Ecological Assessment, 1999.
• State Program on use of Production and Consumption Wastes, 2005 Governmental degree #389 19 August 2005.

The Environmental Protection Law, 1999 is a key legal document which defines policy and legal relationships in area of environmental protection as well as institutional basis for environmental protection.

A State Environmental Action Plan (SEHAP) defines the legal framework of environmental protection and related activities. Implementation of strategies on environmental protection, proposed by the SEHAP is based on an intersectoral approach, involving all stakeholders: government structures, NGOs, international organizations and civil society in the process of implementation of action plans on environmental protection.

Environmental protection related permissions are given out in line with the Environmental Protection Law, 199, Law on Ambient Air protection, 2003, Law on waste of production and consumption, October 18, 2002 and Government Decree #103, 2004 on Roster of permissions, issued by the government structures.

Licenses for management of dangerous waste are based on the Law on Licensing #12, 1997 and the Law on industrial safety of dangerous productions (#93, 2001) (see Attachments 1 and 2). Proponents of new projects have to apply for an environmental agreement certificate.

The Ministry of Health’s Order no. 393 dated September 18, 2002 approved Targeted Program on Health Care Waste Management (HCWM) and Hospital Acquired Infections (HAI) and plan on its implementation in pilot regions. This MoH’s Order has also approved implementation of WHO recommendations on HCWM in hospitals. These documents contain also the technical norms regarding the management of medical waste and also the methods for the data collection regarding the medical waste. Basically it is about the method for collection, wrapping, temporary storing, transportation and disposal of the medical waste. Special norms for dangerous medical wastes to prevent the contamination of the environment and peoples’ health are being implemented by Infection Control teams in pilot hospitals (pilot regions). Republican Meeting on HAI and HCWM at the national level is planned for September-October 2005 to discuss results of the pilot project and further next steps.

The Targeted Program on HCWM and Hospital Acquired Infections HAI has chapters regarding:

• the existing situation for HCWM,
• goal and objectives,
• the implementation stage (assessment of HCWM in health facilities with collection of data on volume of waste produced; development of the legislation for ensuring safe HCW management practices; establishment of institutional set-up for Infection Control in health facilities; identification of appropriate HCW treatment technologies; steps of Action plan),
• management and implementation arrangements,
• potential funding sources,
• capacity building.

Inspection and enforcement responsibility for applicable laws for healthcare facilities is the responsibility of the Department of Sanitary Epidemiological Surveillance, the MoH’s United Directorate of Construction Enterprises and also of the 54 oblast, city and rayon SESs.

A consultation process has been initiated by the MoH’s Manas-II Working Group with the authorities in charge of the environmental protection. The specialists from the Ministry of Ecology and Emergency Situations, Department of Sanitary Epidemiological Surveillance, the MoH’s United Directorate of Construction Enterprises have been consulted to confirm the legal frame and regulations in the field and to discuss the proposed management plan.

II ENVIRONMENTAL MANAGEMENT PLAN

2.1 Introduction

The Environmental Management Plan (EMP) has been prepared in order to integrate environmental concerns into the design and implementation of the proposed project. The EMP would support:

(a) inclusion of EMP follow-up procedures in the operational processes of the Department of Sanitary Epidemiological Surveillance and also of the 48 rayon SES stations;
(b) highlighting the EMP follow-up responsibility in the job description of the MoH’s United Directorate of Construction Enterprises;
(c) training of designated staff from the health facilities participating in the project as well as from the Department of Sanitary Epidemiological Surveillance and the MoH’s United Directorate of Construction Enterprises and also from the rayon authorities in project implementation;
(d) site-specific environmental screening concerning all project supported activities for the rehabilitation of the FAPs, FGP; and the MOH’s building;
(e) monitoring and evaluation of mitigation measures identified in the site-specific reviews; and
(f) development of Environmental Guidelines for ecological planning and design of healthcare facilities and for waste handling (including demolition and construction debris and medical waste).

2.2 Establishment of Environmental Expertise within the Ministry of Health and SES Department Structures

A Specialist would be identified within the Ministry of Health and SES Department, who would be responsible for coordination and supervision of the environmental plans and risk mitigation measures undertaken in the project and cooperate with territorial departments for environment
protection. The Specialist would work in close coordination with the MoH’s Department/Unit responsible for coordination of project activities as related to EMP implementation and would:

a) coordinate environmental training for health staff, designers and local contractors;
b) disseminate existing environmental management guidelines and develop guidelines in relation to issues not covered by the existing regulations, for implementation, monitoring and evaluation of mitigation measures;
c) ensure contracting for construction and supply of equipment includes reference to appropriate guidelines and standards; and
d) conduct periodic site visits to inspect and approve plans and monitor compliance.

2.3 Site Specific Environmental Screening and Review

As a part of the EMP, all project supported activities for rehabilitation/renovation of the existing FAPs/FGPs and the Ministry of Health’s building would be subjected to a site-specific environmental screening and review process, according to the existing Sanitary Norms and Rules, 2004. The Local authorities are obliged according to the law to submit an Environmental Approval for the civil works. This process would minimize site-specific environmental impacts and would use a standardized appraisal format that includes, but is not limited to, review of:

a) current environmental problems at the sites (soil erosion, water supply contamination, etc.);
b) potential environmental impacts, if any, due to the project (disposal waste from construction, medical waste handling and disposal, construction noise and dust, etc); and

c) potential requirements, if any, for temporary relocation of services for patients and location of patients and clinical staff during the construction activities.

2.4 Supervision

The environmental issues including mitigation measures would be supervised periodically by the MOH, the SES Department, and other agencies authorized by Oblast and Rayon SESs.

No major environmental impacts are anticipated under the proposed program given the relatively small size of most of the investments. These investments are expected to be environmentally beneficial (such as the introduction of energy-conserving technology) and none of the units to be financed is expected to have any large scale, significant and/or irreversible impacts. No new structures of works of significant size are envisaged under the project. The potential negative environmental impacts are expected to be localized or able to be mitigated during the implantation stage.

On the other hand, there are environmental regulations in force in the Kyrgyz Republic, that makes control and supervision of construction works mandatory. Contracts and bill of quantities will include clauses for appropriate disposal of unacceptable construction material and disposal of construction waste. Procurement documents will specify that no environmentally unacceptable materials will be used. Bidding documents will include rehabilitation of adequate sanitary facilities, including appropriate disposal of wastewater and sewerage. The environmental
management guidelines included in Attachment 2 should be provided to contractors engaged in civil works under the project, and should be made an integral part of the civil works contracts.

The EMP presented below identifies the environmental impacts and proposed mitigation measures for most of the activities under the rehabilitation of the existing PHC health facilities (FGPs and FAPs) and SES facilities.

<table>
<thead>
<tr>
<th>Environmental Component</th>
<th>Impacts</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soils</td>
<td>contamination from waste materials</td>
<td>• protection of soil surfaces during construction;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• control and daily cleaning of construction sites;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• provision of adequate waste disposal services to assure regular waste discharge and sail</td>
</tr>
<tr>
<td>Water</td>
<td>• clogging of drainage works</td>
<td>• special attention to drainage, proper disposal of oil and other hazardous materials;</td>
</tr>
<tr>
<td></td>
<td>• introduction of hazardous wastes</td>
<td>• rehabilitation of adequate sanitary facilities and purifying constructions including appropriate disposal of wastewater and sewerage</td>
</tr>
<tr>
<td>Air Quality</td>
<td>dust during construction</td>
<td>• dust control by water or other means to keep dust down if problem is evident</td>
</tr>
<tr>
<td>Noise</td>
<td>noise disturbance during construction or operation</td>
<td>• restrict construction to certain hours</td>
</tr>
<tr>
<td>Social Environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aesthetic and Landscape</td>
<td>• risk of construction debris dumped into nearby water bodies;</td>
<td>• 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;</td>
</tr>
<tr>
<td></td>
<td>• disposal of construction waste</td>
<td>• the sites for disposal of construction waste will be government- approved sites;</td>
</tr>
<tr>
<td></td>
<td>• risk of unwanted access to the construction areas</td>
<td>• maximal secondary use of wastes;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• fencing of the construction areas to avoid unwanted access;</td>
</tr>
<tr>
<td>Human Health</td>
<td>• construction accidents</td>
<td>• specially designed systems for handling/disposal of hazardous</td>
</tr>
<tr>
<td></td>
<td>• handling of asbestos</td>
<td></td>
</tr>
<tr>
<td>Material Working Under an Exposure of Noise and Dust</td>
<td>Potential Negative Impact of Materials Used in the Construction</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>---------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>• use of individual protection means;</td>
<td>• prior health check-ups of workers involved in the renovation works;</td>
<td></td>
</tr>
<tr>
<td>• prior health check-ups of workers involved in the renovation works;</td>
<td>• ensure a use of only materials which have an appropriate permission;</td>
<td></td>
</tr>
</tbody>
</table>

**Risks from inadequate handling of medical waste within and outside of health facilities**

<table>
<thead>
<tr>
<th>Risk</th>
<th>Action Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>• risk of dangerous health waste dumped together with non-dangerous waste (without proper treatment);</td>
<td>• ensure segregation of wastes at the point of generation in health facilities;</td>
</tr>
<tr>
<td>• improper disposal of dangerous/hazardous HCW;</td>
<td>• reduce a share of the dangerous waste (by segregating a waste into hazardous and non-hazardous/communal components);</td>
</tr>
<tr>
<td>• risk of unwanted access to areas for HCW storage;</td>
<td>• look at procurement issues for reducing waste stream; where can reuse;</td>
</tr>
<tr>
<td>• transmission of infectious agents to humans</td>
<td>• review worker safety precautions and ensure health worker safety measures at facility level;</td>
</tr>
<tr>
<td></td>
<td>• provision of secure methods of waste storage at facility level, waste collection and transportation;</td>
</tr>
<tr>
<td></td>
<td>• selection and installment of safe treatment and disposal mechanisms (technologies) for health facilities in rural areas;</td>
</tr>
<tr>
<td></td>
<td>• training of staff on HCWM;</td>
</tr>
<tr>
<td></td>
<td>• review costs of total HCWM plan for each facility (separation, transport, treatment, disposal, worker safety, etc)</td>
</tr>
</tbody>
</table>
III. ENVIRONMENTAL GUIDELINES

3.1 Introduction

The Environmental Guidelines section details the specifics to be addressed in the ecological/biologic concept, design and planning of small-scale projects for the upgrading of health infrastructure. The guidelines cover the handling of construction debris generated, selection of construction materials and construction methods with limited impact on the environment, energy saving methods as well as the handling of medical and non-medical wastes under project supported activities. The guidelines are a base for training, programming, research, discussions and workshops. However, in selecting suitable construction methods and materials for the clinics, great attention should be paid to locally available traditions, skills and resources in the project sites.

3.2 The Site

The site specific screening and review should carefully assess the following issues:

- Dust and noise due to the demolition and construction.
- Dumping of construction wastes accidental spillage of machine oil, lubricants, etc.
- Risk from inadequate handling of medical waste or medical radiation hazards.
- Potential requirements, if any, for temporary relocation of patient services, patients and clinical staff during the construction activities.
- Risk due to the sewage requires purifying activities before the water kick

Dust from transportation and handling of construction works will be minimized by water and other means such as enclosure of construction sites. To reduce noise, construction will be restricted during certain hours. All debris, construction and wood waste will be stored within the work site. Wood waste will be stored separately and arranged to be recycled instead of disposing it. Open burning and illegal dumping will not be permitted. Proper sites for earth/clay and sand disposal will be determined and prior approval from relevant authority for disposal will be obtained. Stock piling of construction debris on site will be avoided and waste will be disposed of on a regular basis at the authorized government dumping ground. Debris chutes will be provided to transfer debris from higher floors to the ground.

It is necessary to arrange transport and make agreements with relevant organizations involved in waste and construction debris discharge.

It is also required to create necessary conditions for safe removal of sewage during the rehabilitation and renovation and observe the ecological and sanitary regulations during the rehabilitation of sanitary and technical equipment, sewage pipes and purifying constructions.

The following remarks are intended to reflect the type of standards and guidelines to be incorporated in the construction and rehabilitation of hospital facilities.
At the end of the rehabilitation and renovation, if the new equipment is installed it is necessary to confirm the regularity and safety of each equipment unit and conduct public sanitary epidemiologic Assessment. It is therefore necessary to create a working commission including representatives of environment protection agencies.

### 3.3 Energy Efficiency, Insulation and Ventilation

Insulation should be tailored to the seasonal impacts of climate, internal thermal load, and characteristics of exposure. Vapor berries should prevent moisture intrusion in the roof insulation and outer wall cavities and using damp course.

Window location should be determined on view, ventilation, light, thermal gain, privacy control and interior space functions.

High-efficiency systems for heating domestic water (including solar systems) and for interior space heating should be selected with maintenance and long term running costs in mind. Plumbing should be coordinated to minimize plumbing and also water service to toilets, kitchen and utility rooms. Water-saving faucets, ring mains and other devices also require consideration. All plumbing lines should preferably be copper, with waste lines in cast iron to avoid PVC outgassing. Exposed plumbing and pipe insulation should be of nontoxic material.

All materials and equipment (to be used) should have a security certificate.

### 3.4 Filtration

Using electrostatic, activated charcoal, and high-efficiency filters can greatly improve the indoor air quality. Filters that remove particulates down to 0.3 microns are advisable for capture of microbial agents. Molecular absorbing filters can be used to remove toxic gases originating from internal and external sources. Self-actuating electrostatic filters are possible to clean, less expensive, and use no electricity. Electrical electrostatic filters should have an activated charcoal filter in order to subsequently remove ozone that can be generated by the particles on the filter. When sequential filtering for primary particles, HEPA (high efficiency particulate air filtration) is used, then the use of charcoal, potassium permanganate, or other molecular absorbers plus negative ionization at the delivery point of distribution are desirable. Smoking areas or rooms, if any, should be isolated by partitions and equipped with outside exhaust that creates a negative pressure in the space. Certain medical equipment, copy machines, as well as other reproduction equipment, should be adequately ventilated to remove their particulates and gases. Maintenance, including duct cleaning, filters cleaning and changes, and cleaning positive plate receivers and ionizing tips, should be routine and included in recurrent maintenance budgets.

### 3.5 Electrical Systems

Incoming cables should be located underground. Main entrance feed and panel located away from places of work and waiting is prudent in avoidance of electromagnetic fields. Ground fault wiring near any plumbing fixture is a precaution. Selecting the most energy-efficient light fixtures, lamps, appliances and equipment will reduce energy demand but can introduce
undesirable electromagnetic fields. Be aware that close proximity to table, floor and desk halogen, fluorescent and other high-efficiency fixtures and lamps can cause an exposure to harmful electromagnetic fields.

3.6 Cabinetry and Wood

Nontoxic finishes are available but expensive. Selecting the least toxic finishes is advised. All materials should have appropriate permissions on quality and safety (appropriateness certificate and sanitary-epidemiologic conclusion).

3.7 Finishes

Water-based interior nontoxic, no allergenic paint for drywall or plaster surfaces is preferable to latex or oil-based paints from a respiratory standpoint. Any enamel coating for doors or other surfaces that require a more durable finish is advised to be applied away from interior spaces and be fully aired for over a month before installation. Indoor space should not be occupied until odor and toxins of the paint or finish has been adequately aired.

3.8 Flooring

Tradition tile, marble, stone and terrazzo floors can be hard to stand and walk upon but have legendary durability. Nontoxic grouts and methods of installation should be used. Cleaning considerations should be included in the decision process.

3.9 Window Treatments

Vertical blinds provide light control, are easy to maintain, and require minimal stacking room. Horizontal blind can in combination with a white or light ceiling reflect daylight more deeply into a room. Exterior roller blinds, operable from the interior, are particularly effective in controlling solar thermal gain and interior heat loss, and give the benefit of security. Direct solar radiation can be attenuated by fabric mesh.

3.10 Exterior and Interior Colors

In climates with hot summers, reflective roofs provide a cooling advantage. When cold season occur, darker-colored exterior walls will benefit by low-angle winter solar gains but be less heated by the light angle of the summer sun. White or very light-colored ceilings and interior side walls allow for deeper reflective penetration of natural light. Doors between interior room spaces can act as reflectors. Gloss white lacquer or enamel doors in the path of incoming daylight can lighten adjoining spaces. Interior paints and finishes can affect patients and staff directly. Outdoor finishes with odorous and toxic emissions can also have an effect upon persons indoors through windows, doors and other openings.
3.11 Demolition work

Existing building elements (walls, foundations, ground cement slabs etc.) should be carefully demolished and the debris should be sorted and removed as directed by the EMP (to be determined during the preparation phase of the project). All valuable materials (doors, windows, sanitary fixtures, etc) should be carefully dismantled and transported to the storage area assigned for the purpose. Valuable materials should be recycled within the project or sold.

3.12 Selection of Construction Materials and Construction Methods

Environmentally sound goods and services should be selected. Priority should be given to products meeting standards for recognized international or national symbols. Traditionally well-tried materials and methods should be chosen before new and unknown techniques. Construction sites should be fenced off in order to prevent entry of public, and general safety measures would be imposed. Temporary inconveniences due to construction works should be minimized through planning and coordination with contractors, neighbors and authorities. In densely populated areas, noisy or vibration generating activities should be strictly confined to the daytime.

3.13 Handling of Medical and Non-medical Wastes

The Ministerial Order no.393 dated September 18, 2002 approved Targeted Program on Health Care Waste Management (HCWM) and Hospital Acquired Infections (HAI) and plan on its implementation in pilot regions. This MoH’s Order has also approved implementation of WHO recommendations on HCWM in pilot regions (pilot health facilities). It describes the management of the medical waste and also the methods for the data collection regarding the medical waste. Basically it is about the procedures for collection, wrapping, temporary storing, transportation and disposal of the medical waste. Special norms are in force for dangerous medical wastes to prevent the contamination of the environment and the people’ health.

The segregation of waste is mandatory in all medical units and the monitoring procedures are already developed but implementation is varies as the above mentioned program is being implemented on a pilot basis. The waste generated in clinics and hospitals is to be categorized for management purposes as follows:

1. non-dangerous general waste (the waste assimilated to domestic/communal waste);
2. dangerous waste, including potentially infected waste;

The dangerous waste is classified as follows:

- anatomo-patologic waste – this includes human tissue, human pieces resulted from autopsy laboratories, dead bodies, fetus and placenta;
- infectious waste – this includes all waste which contains or was in contact with blood or viruses (syringes, needles, scalpel blades, razor blades, gloves, lines);
- Sharps – this includes hypodermic needles and syringes, scalpel blades, razor blades, etc;
- chemical and pharmaceutical waste – this includes the expired vaccines, drugs, and
used substances from laboratories.

The non-dangerous waste is the waste assimilated to domestic waste. There is domestic waste non-organic – plastics, non aluminum cans, cardboard packaging etc, and domestic organic waste. The only organic waste generated in the clinics will be food waste and garden refuse.

The problem in the Kyrgyz Republic has been a poor practice of segregation of the waste. All dangerous waste generated in clinics should be removed by for disposal as appropriate.

Waste generated in the clinics and hospitals should be segregated as follows:

- Dangerous waste (infectious waste, sharps, chemical and pharmaceutical waste);
- Sharps – Special puncture-resistant containers; and
- Non-dangerous waste;

The techniques for treatment of infectious waste are steam sterilization, incineration, microwave or ultraviolet heating systems, ionizing radiation or chemical treatment. The choice of technique depends on which category of infectious waste to be treated, as well as a location of the setting (urban vs rural area). In the case of the Kyrgyz Republic the choice of technique is also constrained by the budgetary resources available for maintenance.

Currently the situation on HCWM varies by regions. Health facilities in some regions ensure separate collection of general and specific waste at the point of generation while others do not. The non-dangerous general waste is collected in the containers of multiple uses and then disposed to landfills in urban areas or burnt in rural areas. As a share of non-dangerous waste is significant a separation of a waste is a critical. This would result in downsizing a share of dangerous waste which is subject for specific treatment. Infectious waste which has been treated is no longer hazardous and may be mixed with and disposed of as ordinary solid waste, provided the waste does not pose other hazards that are subject to national regulations. Anatomopatologic waste is disposed via burial or incineration. Potentially infected health waste (including sharps and instruments) are disposed to landfills after disinfection. Currently, a country does not have incineration and waste recycling plants.

There is ongoing pilot project which is piloting the following:

- testing of 2 waste treatment technologies for health facilities in rural areas (with a limited waste production);
- piloting of infection control practice in health facilities (institutional set-up of infection control with introduction of a position of Infection Control Specialist and implementation of Regulation on Infection Control).

The above-mentioned strategy on HCWM and HAI was developed taking into account available technical and financial possibilities.

The new national “Manas Taalimi” health reform program envisages continuation of the work on further implementation of the targeted HAI and HCWM program; further development of the
legislative base on HCWM, implementation of a regular monitoring over the HCWM in each health facility and training of staff on environmental issues.
ATTACHMENT 1
ENVIRONMENTAL ADMINISTRATIVE, POLICY AND LEGAL FRAMEWORK – RESULTS OF REVIEW

Administrative, Policy and Legal Framework

Ministry of Ecology and Emergency Situations is a central agency on environmental protection. It has territorial departments.

Environmental protection relations and issues of rational use of natural resources are regulated by the Constitution and the Law on Environmental protection, 1999 and other laws and regulations of different level, State Environmental Hygiene and Protection Plan, 1999, other environmental and related international conventions and treaties ratified and signed by the Kyrgyz Republic and legislation and Governmental regulations and Ministerial orders.

Environmental Protection Law (EPL)

Law on Environmental Protection, 1999 is a main legislative document assigning policy and regulating legal relations in environmental protection and nature management, which provides an institutional basis for environment protection. According to the EPL, the highest environmental protection and nature management supervisory functions are imposed to the national and territorial public agencies on environment protection, while the departmental supervision over the environmental conditions on lower levels is on the Ministries and administrative agencies (Article 31. Part V). The Part V also describes the system of state environmental monitoring and interrelations between different public agencies, functions and duties on environmental protection (Part VIII).

The EPL defines general principles of environmental protection policy (Article 3), measures on environmental protection (Article 6), environmental quality regulation (Part II), ecological requirements to maintain economical activity and major directions to implement these principles, including harmonization of environmental protection policy and development programs, interrelations between territorial and ecological development, mandatory implementation of environmental permitting procedures in construction, exploitation and implementation of specific social and economic activities considerably influencing environment and use of economic incentives (Part IV).

The section IV also covers issues of control of activities influencing environment, permitting procedures and environmental assessment, dangerous substances, harmful and solid waste products (Article 23), chemical fertilizers and pesticides, and radiation safety.

Other Environmental and related Legislation and International Conventions and Treaties

Just after the Law on Environmental Protection, a series of other basic environmental and related laws were adopted, including the Law on Environmental Assessment, 1999, the Law on Production and Consumption Wastes, 2001, and the Law on Sanitary and Environmental Population Welfare.
In addition, several Governmental regulations and Ministerial orders on environmental protection were adopted to support the above stated laws and other issues which are not adjusted in the legislation so far.

**National Environmental Strategy; State Environmental Action Plan; National Plan for Adoption of Acquis Communautaire**

**The State Environmental Hygiene and Protection and Plan (SEHAP) of 1999**

The State Environmental Hygiene and Protection and Plan (SEHAP) of 1999 forms a legal basis for environmental protection and related activities. Implementation of the SEHAP strategies on environmental protection is based on intersectoral approach, including all stakeholders i.e., public agencies and departments, NGOs, associations, international organizations and society for effective implementation of activities on environmental protection.

The SEHAP was developed to integrate the environmental protection policy into other sector policies (industry, agriculture, transport, physical planning and health sector).

Development of the strategies to set up a correspondence in horizontal legislation and regulations on waste collection and discharge is in the process.

**Environmental Assessment and Spatial Planning**

The Law on Environmental Assessment, 2003, adjusts legal relations in environmental assessment for the prevention of negative environmental consequences as a result of economic and other activities. The law sets general principles and types of environmental assessment, powers, rights and duties of public agencies and the draft law makers. It also defines the order for the state environmental assessment, assessment of environmental influence, removal of environmental assessment discrepancies, and responsibility for violation of the legislation on environmental assessment.

**Environmental Permitting Procedure for New Investments**

The existing system of environmental permits in the Kyrgyz Republic is based on an individual approach to different environmental components and regulation of air and water protection and waste management by separate statutory acts. The system has not been changed since it was established in 1970, even though there several new laws on environmental protection have been adopted.

The environmental permits in the Kyrgyz Republic are issued according to the Law on Environmental Protection of 1999, the Law on Ambient Air Protection of 2003, the Law on Production and Consumption Wastes of 2001 and Governmental regulation no.103 of 2004 on the Register of Permitting Documents issued by public agencies.
Licenses on dangerous wastes management are based on the Law on Licensing no.12 of 1997, and the Law on the Safety of Dangerous Industrial Projects no.93 of 2001, which also provides permits for the operation of dangerous plants.

The majority of the environmental protection permits are issued by the Ministry of Ecology and Emergency Situations (the Table is given below). However, permits for hydraulic works and sewage discharge are provided by two different ministries. Permits are reconsidered every year and even twice a year on sewage discharge. Observance of the issuance of permits is controlled by inspectors from territorial control and inspection services under the Ministry of Ecology and Emergency Situations (MEES), at a maximum of once a year.

**Table 1: Institutional Duties on the Issuance of Environmental Permits**

<table>
<thead>
<tr>
<th>Type of Permit or License</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permit on Atmospheric Emission</td>
<td>MEES/DEP</td>
</tr>
<tr>
<td>Permit on Sewage Discharge</td>
<td>MEES/DEP in accordance with Ministry of Health</td>
</tr>
<tr>
<td>Permit on Waste Placement</td>
<td>MEES/DEP</td>
</tr>
<tr>
<td>Permit on Special Hydraulic Works</td>
<td>Ministry of Agriculture, Water and Processing Industry in accordance with MEES/DEP</td>
</tr>
<tr>
<td>Permit on Dangerous Industrial Project Operation</td>
<td>MEES, State Technical Stewardship</td>
</tr>
<tr>
<td>License on waste utilization, placement, destruction and disposal and disposal of toxic material and substances including dangerous waste.</td>
<td>MEES/DEP</td>
</tr>
<tr>
<td>Permit on storage and transportation of toxic and explosive substance</td>
<td>Ministry of Internal affairs in accordance with MEES/DEP</td>
</tr>
<tr>
<td>License on transportation of dangerous waste</td>
<td>MEES/DEP</td>
</tr>
<tr>
<td>Permit on Energy Plan Exploitation</td>
<td>State Agency on Energy</td>
</tr>
</tbody>
</table>

**EPL Related Provisions**

The Environmental Protection Law and related provisions have been described above.

**Internal or Self-monitoring system**

The internal or self-monitoring system must be created in each company. The system parameters are based on the provisions of environmental agreement and permits. Selective inspection and data analysis must be carried out by the corresponding accredited laboratories.

**The Ministerial Order no. 393/2002**

The Ministry of Health’s Order no. 393 dated September 18, 2002 approved the Targeted Program on Health Care Waste Management (HCWM) and Hospital Acquired Infections (HAI)
and a plan on its implementation in pilot regions. This MO contains the technical norms regarding the management of the medical waste and also the methods for data collection regarding medical waste. Basically it is about the method for collection, wrapping, temporary storing, transportation, disposal and utilization of the medical waste. In pilot hospitals (pilot regions), the infectious control group (or specialist) implements special norms and standards concerning dangerous medical waste products to prevent environmental contamination and population health damage.

The Targeted Program on Health Care Waste Management (HCWM) and Hospital Acquired Infections (HAI)

The Targeted Program on HCWM and Hospital Acquired Infections HAI has chapters regarding:

- Existing situation for the HCWM,
- Goals and objectives,
- Implementation stage (assessment of HCWM in health facilities with collection of data on volume of waste produced; development of the legislation for ensuring safe HCW management practices; establishment of institutional set-up for Infection Control in health facilities; identification of appropriate HCW treatment technologies; steps of Action plan),
- Management and implementation arrangements,
- Potential funding sources; and
- Capacity building.
ATTACHMENT II

ENVIRONMENTAL GUIDELINES FOR CIVIL WORKS CONTRACTS

The contractors are required to use environmentally acceptable technical standards and procedures during the implementation of construction of works. All construction contracts will contain the following requirements:

- Take precautions against negative influence on environment, any environmental damage or loss through prevention or suppression measures (where it is possible) instead of liquidation or mitigation of negative consequences.
- Observe all national and local laws and rules on environmental protection. Identify officers responsible for the implementation of activities on environmental protection conforming to instructions and directions received from the construction and design or environmental protection agencies.
- Minimize dust emission to avoid or minimize negative consequences influencing air quality.
- Provide pedestrian crossing and roads and access to the public places.
- Provide markets with light and transient roundabout connections to assure safety and convenience.
- Prevent or minimize vibration and noise from vehicles during explosive activities.
- Minimize damages and assure vegetation recovery.
- Protect surface and underground water from soil pollution. Assure water collection and distribution.