

**ENVIRONMENTAL MANAGEMENT
FRAMEWORK**

FOR

**KYRGYZ HEALTH AND SOCIAL PROTECTION
PROJECT**

(in the context of Health SWAp)

Including Project Additional Financings

and

**KYRGYZ SECOND HEALTH AND SOCIAL
PROTECTION PROJECT**

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ENVIRONMENTAL MANAGEMENT FRAMEWORK

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and

KYRGYZ SECOND HEALTH AND SOCIAL PROTECTION PROJECT

I. BACKGROUND

1.1 Introduction

This Kyrgyz Second Health and Social Protection project (HSPP-2) is the Bank's fourth supported operation 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) also was implemented well. The ongoing Kyrgyz Health and Social Protection Project (HSPP) and its Additional Financings (AFs) are being also implemented in a satisfactory manner. Counterparts and the donor community continue to view the Bank favorably, as health is a key goal of government policies.

The Environmental Management Plan (EMP) prepared for the HSPP has been updated to take into account new health facility construction planned under the AF, and to provide environmental guidance for implementation of the new HSPP-2.

The HSP project components remain the following:

Component 1. Support for the Manas Taalimi Health Reform Program and its associated Program of Work (US\$13 million).

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

The first Component (US\$13 million) has supported implementation of the Manas Taalimi Program of Work through a Sector-Wide Approach (SWAp). Funds have been used to finance a combination of investment and recurrent expenditures for priority areas of the 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 are made through the review and approval of 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 are discussed between the government and health donors.

Additional Financing

The Government of the Kyrgyz Republic (GOK) requested the Bank to provide additional financing to expand activities that scale-up the project’s impact and its development effectiveness. The original project in an amount of SDR 10.4 million (US\$15 million equivalent) was approved on December 15, 2005 and the Grant became effective on June 8, 2006. The original closing date is set for June 30, 2011. A request has been received from the Government to extend the closing date to June 30, 2013. An AF Grant was approved on June 12, 2008 and the Grant became effective on July 31, 2008. The closing date of the first AF was originally June 30, 2011, and a request was received from the Government to extend the closing date to December 31, 2011.

The HSPP revised project development objectives (PDO) are to: (i) improve the health status of the population by improving access, financial protection, efficiency, equity and fiduciary performance in the Kyrgyz health sector, (ii) strengthen the targeting of social benefits by developing effective administration to improve access to social services, and (iii) protect and improve health and nutritional status of vulnerable population in the face of food price shocks while ensuring the building of social cohesion. The additional financing would help finance the implementation of expanded activities that scale-up the project’s impact and its development effectiveness under the revised PDOs.

The second Additional Financing (AF) for the Health and Social Protection Project (P084977) in an amount of US\$24 million is being financed through an IDA Grant (US\$10.80 million or 45% of the total amount) and an IDA Credit of US\$13.20 million or 55% of the total amount). The second additional financing would help finance the implementation of expanded activities that scale-up the project’s impact and its development effectiveness. Specifically, it would finance activities necessitated by the conflict in the Osh and Jalal-abad provinces in June 2010, which exacerbated the already poor health, nutrition and social conditions in the South of the country. A number of activities to improve health and nutrition conditions in the South are envisaged to reach to vulnerable populations in the community. In addition, technical assistance in health and social protection is envisaged to support related reforms. It is expected that the AF would have two components linked to the original two components: (i) **Protecting Health and Nutritional Status in Post Conflict Areas**, and (ii) **Sustaining Health Coverage and Enhancing Policy Reforms**.

Second Health and Social Protection Project

The project development objective of HSPP-2 is to: (i) support implementation of the “Den Sooluk” (DS) National Health Reform Program 2012-2016 following the principles of a Sector Wide Approach, focusing on improving control and prevention of cardiovascular diseases, mother and child health, tuberculosis and HIV infections, as priority areas; and (ii) enhance effectiveness of social assistance and services aimed to support the poor and the vulnerable.

The HSPP-2 would be implemented over a period of five years using a Specific Investment Loan instrument for a \$15M IDA credit. Similar to its predecessor, it would adopt a Sector-wide Approach for the health sector while using a traditional Bank-investment arrangement for the social protection component. The Project consists of two components. The first component supports implementation of reforms in the health sector envisaged in the Den Sooluk reform strategy 2012-2016. The second component supports the Governments’ Medium-term Social Protection Strategy to improve the efficiency and effectiveness of cash benefits and social care services in combating poverty.

1.2 Major Investment Components

The main, physical investment component of the proposed project envisaged to be financed from IDA funds under HSPP was the rehabilitation/renovation of a Ministry of Health building dedicated to administrative purposes. Minor repairs of mental health centers were also envisaged. These investments are reflected in the Procurement Plan for the Project.

This project will contribute also envisages other minor rehabilitation/renovation of existing selected FAPs, FGPs and Centers of Sanitary Epidemiological Surveillance (CSES) 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 the new Health Strategy, but do not involve the use of IDA funds.

Second Additional Financing

The Second Additional Financing supports one main investment activity that requires environmental management oversight:

Component 1 – Protecting Health and Nutritional Status in post conflict areas. This component would be linked to Component 1 of the original operation.

- **1.A - Strengthening oblast level health care services** for up to three Oblasts in the South (Osh, Jalal-abad, and Batken) through renovation or replacement of up to three hospitals. The Additional Financing would support reconfiguration of existing facilities, works, and limited equipment once an assessment of needs is conducted, or may support demolition of existing facilities and construction of replacement hospitals. The aim would be to: (i) improve health outcomes and (ii) ensure inter-regional equity in access to serve both the rural and urban population throughout the three oblasts.

Second Health and Social Protection Project

The HSPP-2 will support one main investment activity that requires environmental management oversight:

Component 1 – Support for implementation of Den Sooluk (DS) program of reforms (US\$13.5 million total IDA credit/grant financing).

Sub-component 1: Improve the delivery of core services as defined in DS. The DS strategy defines four priority health improvement areas for which expected gains in health outcomes have been set and improvement in delivery of core services is expected: (i) cardiovascular disease, (ii) mother and child health, (iii) TB, and (iv) HIV. These areas were selected based on the composition of the disease burden and the commitments of the Kyrgyz Republic to achieve the Millennium Development Goals (MDGs 4 and 5).

This sub-component would support the delivery of core services through: (i) population interventions, (ii) evidence-based individual medical services, and (iii) the appropriate institutional arrangements that are needed to deliver them. Population interventions will address primary determinants of health outcomes in terms of health behaviors, social, and environmental factors, for example smoking, alcohol consumption, road safety etc. Key evidence-based individual medical services will be addressed along with the needed facility level quality improvement efforts to deliver them at scale to the population. It is intended that during the implementation of DS, MOH will ensure that population coverage of evidence-based core services will increase, and that the allocation of limited funding will be driven by the needs of core services. This shift would most likely require investments in deteriorating infrastructure. Accordingly, safeguard measures for civil works and waste management are included in this EMF.

1.3 Environmental Category

The only activity funded from IDA funds in the original **HSP project** has been the rehabilitation/renovation of the administrative building of the Ministry of Health. Therefore, the immediate impact on the environment was 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.

The **2nd Additional Financing** will fund renovations or new hospital design and construction of up to three Oblasts in the South (Osh, Jalal-abad, and Batken) through renovation or replacement of up to three hospitals. The Additional Financing would support reconfiguration of existing facilities, works, and limited equipment once an assessment of needs is conducted, or may support demolition of existing facilities and construction of replacement hospitals. In addition, minor

repairs to mental health centers would be supported under the AF and ongoing minor rehabilitation/renovations of existing selected medical facilities sponsored by other donors will continue under the SWAp program that supports implementation of the National Manas Taalimi health reform program and the new Health Strategy.

The **new HSPP-2** will fund required investments in renovating deteriorating health facility infrastructure throughout the country. Minimal to moderate environmental impacts are expected from civil works for rehabilitation or renovation of MoH facilities in various locations around the country. Specific sites are not yet known, but would be identified in each annual workplan during implementation.

Expected environmental impacts from these projects include dust and noise related to demolition and construction; disposal of construction waste; and disposal of wastewater, emissions control and hazardous materials (infectious waste) disposal during operation of the facilities. This Environmental Management Framework, includes a screening tool to identify sub-project activities that would require environmental assessments and management plans (sub-project EMPs), and provides guidance for preparation of the EMPs. It is anticipated that sub-project activities would fall into category B or C. Should any project activities be determined to have significant safeguards issues such that they would be considered category A, the project would need to be restructured to reflect the change in category. The EMF includes a negative list specifying the land acquisition would not be eligible for funding under the project.

The potential adverse environmental impacts for HSPP, AF and HSFF-2 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, air emissions and spillage of hazardous material during operation of the building;
- Risk from inadequate handling of medical waste.

Risks from inadequate handling of medical waste are being considered and are being supported through a Swiss-funded project in the health sector. The broader EMF 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. Project costs associated with environmental mitigation are eligible for funding from the project budget. As was the case with HSPP and its AF, the HSPP-2 is classified under the Environmental Category B in accordance with World Bank operational policies and requires the preparation of an Environmental Management Framework (EMF), since the specific sub-project investments will be identified during implementation, not prior to Appraisal.

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 were 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. The Ministry of Health has assigned functional responsibilities for the eight components of the Manas Taalimi, and these have been allocated within appropriate organizational units in the Ministry of Health. Further refinement and streamlining of coordination responsibilities for each component were agreed at appraisal of HSPP, when the reorganization of the Ministry was finalized. The program itself has been 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 flow through the MOH.

HSPP-2 Update (Implementation Arrangements)

MOH has successfully implemented three Bank- financed operations in the health sector, and significant project management capacity has been built. A specialist has been identified within the Department of Sanitary Epidemiological Surveillance (SES), who - together with the staff of the MOH's United Directorate of Construction Enterprises – is responsible for coordination and supervision of the EMP and risk mitigation measures to be undertaken in the project. The specialist works closely with the MOH's Department/Unit responsible for implementation of the project, staff on the ground, and with national and oblast level environmental officials. They: (a) coordinate relevant training for 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. These arrangements have proven effective for management of environmental safeguards issues in the construction of an annex to the MOH's administrative building in Bishkek, which was financed under the current Health & Social Protection Project.

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 Environmental Assessment, 1999.
- Law on Environment Protection, 1999.
- Law on Ambient Air Protection, 1999.
- Law on Water, 1993.
- Law on Public Health, 2009
- Law on waste of production and consumption, October 18, 2002.
- Law on radioactive safety of population, August 1, 2003.
- Interstate standard GOST 17.9.1.2-2001 on “Environment protection. Handling of waste. Classification of waste. Identification and coding. Main provisions”.
- MoH’s Order #393, September 18, 2002 approving Targeted Program on HCWM and HAI.
- MoH’s Order #87, July 28, 2007 approving Phase II of Targeted Program on HCWM and HAI, .
- Directions on the Order of the Public Ecological Assessment, 1999.
- Directions on the Order of the Influence on the Environmental Assessment, 2001.
- State Program on use of Production and Consumption Wastes, 2005 Governmental degree #389 19 August 2005.

Guide on Medical Waste Management in Health Organizations of the Kyrgyz Republic (approved by Order #414 of Chief Sanitary Doctor of the Kyrgyz Republic as of September 13, 2011)

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 draft Action Plan on environmental hygiene and children’s health defines the legal framework of environmental protection and related activities. Implementation of strategies on environmental protection, proposed by this Action Plan 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 the above documents regulate the methods 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).

The Targeted Program on HCWM and Hospital Acquired Infections (HAI), Phase II, 2007-2011 was developed and approved based on results and lessons of the above mentioned pilot and is being implemented with a support of the Kyrgyz- Swiss-Swedish Health Project. Pilot was scaled up covering Naryn, Talas, Issyk-Kul, Chui oblasts during the period 2006-2010. Currently this project is implemented in Osh, Batken, Djalal-Abad and Chui oblasts (2011-2013 yy). Guide on Medical Waste Management in Health Organizations of the Kyrgyz Republic is published (approved by Order #414 of Chief Sanitary Doctor of the Kyrgyz Republic as of September 13, 2011) and 2nd addition (2012) as amended with NGO's *Preventive Medicine* research results.

The Targeted Program on HCWM and Hospital Acquired Infections HAI, Phase II 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; 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, Republican Infection Control Center and also of the 48 city and rayon SESs.

A consultation process was initiated by the MoH's Manas-II Working Group with the authorities in charge of the environmental protection. The specialists from the State Agency of Ecology and Forestry under the KR Government, Department of Disease Prevention and Expertise (DDPE, former Department of Sanitary Epidemiological Surveillance), the MoH's United Directorate of Construction Enterprises were consulted to confirm the legal frame and regulations in the field and to discuss the proposed management plan.

II ENVIRONMENTAL MANAGEMENT FRAMEWORK

2.1 Introduction

The Environmental Management Framework (EMF) has been prepared in order to integrate environmental concerns into the design and implementation of the HSPP, AF and proposed HSPP-2. The EMF would support:

- (a) inclusion of EMF follow-up procedures in the operational processes of the United Directorate of Construction Enterprises, Department of Disease Prevention and Expertise and also of the 48 oblast, city and rayon SES stations;
- (b) highlighting the EMF 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 United Directorate of Construction Enterprises, the DDPE and the MoH's United Directorate of Construction Enterprises and also from the oblast, city and rayon Centers of Sanitary Epidemiological Surveillance (CSES);
- (d) site-specific environmental screening and preparation of related sub-project Environmental Management Plans (EMPs) as appropriate for all project supported activities, including rehabilitation of the FAPs, FGPs, the MOH's Bishkek building, any minor repairs to be executed in mental health centers, and renovations or new construction of health care facilities;
- (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 DDPE Department Structures

A Specialist would be identified within the United Directorate of Construction Enterprises and DDPE Department, who would be responsible for coordination and supervision of the environmental plans and risk mitigation measures undertaken in the projects 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 EMF 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.

As noted above (paragraph 1.4., Institutional and Implementation Arrangements), these steps have been taken such that good management capacity for implementation of the EMF is now in place.

2.3 Site Specific Environmental Screening and Review

As a part of the EMF, all project supported activities for rehabilitation/renovation of the existing health facilities and the Ministry of Health's building have been 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.

The construction any new health care facilities would require a site-specific EMP that would identify the potential environmental impacts and the mitigation measures to be implemented. The site-specific EMPs would need to be disclosed and consulted with affected stakeholders.

2.4 Monitoring and Supervision

The environmental issues including mitigation measures are supervised periodically by the MOH, the DDPE Department, other agencies and authorized rayon CSESs.

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 the installation of on-site waste management facilities) and none of the units to be financed are expected to have any large scale, significant and/or irreversible impacts. The potential negative environmental impacts are expected to be localized or able to be mitigated during the construction and operation stages.

Environmental regulations currently in force in the Kyrgyz Republic make control and supervision of construction works mandatory. Contracts and bill of quantities will include clauses for appropriate disposal of 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 will be provided to contractors engaged in civil works under the project, and will be made an integral part of the civil works contracts.

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

Environmental Management Plan

Environmental Component	Impacts	Mitigation Measures
Physical Environment		
Soils	contamination from waste	• protection of soil surfaces during

	materials	<p>construction;</p> <ul style="list-style-type: none"> control and daily cleaning of construction sites; provision of adequate waste disposal services to assure regular waste discharge and soil
Water	<ul style="list-style-type: none"> clogging of drainage works introduction of hazardous wastes 	<ul style="list-style-type: none"> special attention to drainage, proper disposal of oil and other hazardous materials; rehabilitation of adequate sanitary facilities and purifying constructions including appropriate disposal of wastewater and sewerage
Air Quality	dust during construction	<ul style="list-style-type: none"> dust control by water or other means to keep dust down if problem is evident
Noise	noise disturbance during construction or operation	<ul style="list-style-type: none"> restrict construction to certain hours
Social Environment		
Aesthetic and Landscape	<ul style="list-style-type: none"> risk of construction debris dumped into nearby water bodies; disposal of construction waste risk of unauthorized access to the construction areas 	<ul style="list-style-type: none"> 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 construction waste will be government- approved sites; maximal secondary use of wastes; fencing of the construction areas to avoid unauthorized access;
Human Health	<ul style="list-style-type: none"> construction accidents handling of asbestos material working under an exposure of noise and dust potential negative impact of materials used in the construction 	<ul style="list-style-type: none"> specially designed systems for handling/disposal of hazardous wastes; training for workers on appropriate methods for handling asbestos materials; use of individual protection means; prior health check-ups of workers involved in the renovation works; ensure a use of only materials which have an appropriate permission;
Risks from inadequate handling of medical waste within and outside of health facilities		
	<ul style="list-style-type: none"> risk of dangerous health 	<ul style="list-style-type: none"> ensure segregation of wastes at the

	<p>waste dumped together with non-dangerous waste (without proper treatment);</p> <ul style="list-style-type: none"> • improper disposal of dangerous/hazardous HCW; • risk of unauthorized access to areas for HCW storage; • transmission of infectious agents to humans 	<p>point of generation in health facilities;</p> <ul style="list-style-type: none"> • reduce a share of the dangerous waste (by segregating a waste into hazardous and non-hazardous/communal components); • look at procurement issues for reducing waste stream; where can reuse; • review worker safety precautions and ensure health worker safety measures at facility level; • provision of secure methods of waste storage at facility level, waste collection and transportation; • selection and installment of safe treatment and disposal mechanisms (technologies) for health facilities in urban and rural areas; • training of staff on HCWM; • review costs of total HCWM plan for each facility (separation, transport, treatment, disposal, worker safety, etc)
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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 civil works 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 Sites

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

- Prior consultation with the affected community to explain the planned works, potential impacts and understand community concerns.

- Dust and noise due to the demolition and construction.
- Dumping of construction wastes, accidental spillage of machine oil, lubricants, etc. (see Annex regarding management of asbestos-containing materials and PCBs in obsolete transformers).
- 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 from discharge of infectious or hazardous waste to the sewage system, requiring pre-treatment.

Dust from transportation and handling of construction works will be minimized by sprinkling 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 or systems (e.g., sewerage) are installed, it is necessary to confirm the regularity and safety of each equipment unit or system. 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 barriers 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 works and also water service to toilets, kitchen and utility rooms.

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

3.4 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.

Installation and use of electrical generators has been allowed by local legislation as an alternative source of energy to ensure availability of electricity.

3.5 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 (certificate of conformity).

3.6 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.

3.7 Flooring

Traditional 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.

3.8 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.

3.9 Exterior and Interior Colors

In climates with hot summers, reflective roofs provide a cooling advantage. When cold season occurs, 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.

3.10 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 site-specific 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.

3.11 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-trying 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.

3.12 Handling of Medical and Non-medical Wastes

The Ministerial Order no.393 dated September 18, 2002 regulates procedures on health care waste management 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 public health impacts.

The segregation of waste is mandatory in all medical units and the monitoring procedures are already developed but implementation 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;

Classification of health waste:

New modified classification of health waste was adopted based on recommendations of Basel Convention on “Control of transboundary transfer of waste and its disposal (Annexes I, II, VIII & IX of Basel Convention) with identifying the following subgroups (categories):

Class A - non-dangerous waste is the waste assimilated to domestic waste which wasn't in contact with biological fluids of patients. There is domestic waste non-organic – plastics, non aluminum cans, cardboard packaging etc, and domestic organic waste which doesn't contain any toxic elements. The only organic waste generated in the clinics will be food waste and garden refuse, except food waste from the infectious disease department.

Class B – Dangerous (high risk) waste – potentially infected health waste, requiring special risk mitigation measures

- B1- anatomico-pathologic waste – this includes human tissue, human pieces resulted from autopsy laboratories, dead bodies, fetus and placenta;
- B3 - infectious waste – this includes all waste which contains or was in contact with blood or other bodily substances;
- B2 - sharps – this includes hypodermic needles and syringes, scalpel blades, razor blades, etc;
- B4 – Infected waste – all waste from the infectious diseases departments (incl food waste) and parasitology and microbiology laboratories working with pathogens/groups 3 &4
- B5 – Highly dangerous infectious waste – infectious waste contaminated by agents of highly pathogenic and resistant infections

Class C – Waste which is close in its content to an industrial waste

- C1 - pharmaceutical waste – this includes the expired vaccines, drugs, and used substances from laboratories
- C2 – Cytotoxic pharmaceutical waste
- C3 – Disinfectants with an expired date
- C4 – Objects and medical equipment which contains mercury
- C5 – Other dangerous waste which is not just health sector specific but rather common like solvents, chemicals, batteries, fixing reagents used in analytical and clinical laboratories, etc

Class D – Radioactive waste – all waste which contains radioactive components. Management of this waste is done in line with requirements for handling radioactive substances and other sources of radiation; in line with radiation safety, etc

The

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 (depending on inclusion of the regions in HCWM project so far). Currently there is health facilities ensure separate collection of general and specific waste at the point of generation. 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. Anatomico-pathologic waste is disposed via burial or incineration. Potentially infected health waste (including sharps and instruments) are disposed to landfills after disinfection. Currently, the country does not have incineration and waste recycling plants. The Osh city obstetric aid facility uses a model autoclaving procedure for dangerous health waste prior its disposal along with communal waste based on the model for urban settings which has been tested at the level of national hospital in Bishkek

There is ongoing pilot project which has piloted so far the following:

- testing of 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 “Den Sooluk” health reform program will envisage 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.

ENVIRONMENTAL ADMINISTRATIVE, POLICY AND LEGAL FRAMEWORK – RESULTS OF REVIEW

Administrative, Policy and Legal Framework

State Agency of Ecology and Forestry under the Government of the Kyrgyz Republic 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, 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 KR Law on Public Health as of 2009.

In addition, several Governmental regulations and official normative legal acts on environmental protection were adopted to support the above stated laws and other issues which are not adjusted in the legislation so far.

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.

Licensing of dangerous wastes management is 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 State Agency of Ecology and Forestry under the KR Government (Table below). However, permits for hydraulic works and sewage discharge are provided by three different agencies (State Agency of Geology and Mineral Resources under the KR Government, State Agency of Ecology and Forestry under the KR Government and Department of Water Resources and Irrigation under the KR Ministry of Agriculture). Observance of the issuance of permits is controlled by inspectors from territorial control and inspection services under the KR Government, at a maximum of once a year as for issuance of environmental permits with a view to promote the project activities

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, September 18, 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) , along with 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) (this program, is described in para 1.5 “Institutional Structure in Environment Management and Healthcare Facilities Planning”)

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.

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.
- Store and dispose of construction waste consistent with national regulations and the sub-project (site-specific) EMP
- 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.

Asbestos and PCBs

1. Asbestos: The project may need to provide advanced environmental training, drawing on official Kyrgyz documents on asbestos, and emphasizing the following main points:
 - The risk presented by asbestos is from inhalation of asbestos fibers in dust, which causes lung disease, including cancer. Asbestos bound in materials (e.g., unbroken roofing sheets) is stable and not a risk.
 - If asbestos are located on the project site, they should be marked clearly as hazardous material.
 - When possible the asbestos will be appropriately contained and sealed to minimize exposure.
 - The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust.
 - Asbestos will be handled and disposed by skilled & experienced professionals using proper protective gear (mask, gloves, and coveralls).
 - Milk is not a prophylactic! In some countries, drinking milk is considered helpful to mitigate the effects of toxic materials. While nutritious, milk has no influence on toxic materials that are inhaled.
 - Asbestos containing materials (roofing sheets) should not be broken or cut. This releases dust.
 - If asbestos material is to be stored temporarily, the wastes should be securely enclosed inside closed containers and marked as hazardous material. Security measures needs to be taken against unauthorized removal from the site.
 - The removed asbestos should not be reused (except for intact roofing sheets, with approval of Public Health Department).
 - Asbestos-containing materials must be disposed in at approved hazardous waste disposal site.

2. PCBs in transformers¹. Polychlorinated Biphenyls (PCBs) are persistent organic pollutants, a class of synthetic organic chemicals. Since the 1930s, PCBs were used globally for a variety of industrial uses (mainly as dielectric fluids in capacitors and

¹ Background information adapted from the UNDP GEF MSP for PCBs in Kyrgyzstan

transformers) because of their chemical stability. In the 1970s it became generally recognized that their chemical stability also represented a serious threat to human health and the environment if they were released. PCBs are considered to be immune-toxic and affect reproduction with specific adverse effects associated with chronic exposure, including damage to the immune system, liver, skin, reproductive system, gastrointestinal tract and thyroid gland. While local impacts close to the source of release of these chemicals into the environment are of concern, the primary impacts are widely distributed and effectively global in nature, given the chemical's characteristics of bioaccumulating higher in the food chain and being subject to long range, multi media transport mechanisms. Based on these characteristics they are generally classified as persistent organic pollutants (POPs). Through the late 1970s and 1980's the production and use of PCBs was generally discontinued, with regulatory bans being applied in many countries. However, there were and remain substantial global inventories of the chemical remaining in operating electrical equipment, stockpiles of retired equipment and PCB contaminated waste, and on localized sites where concentrated releases have occurred.

3. Coordinated global control measures related to POPs were initiated with the creation of the Stockholm Convention on Persistent Organic Pollutants in 2002 and its entry into force in 2004. PCBs were one of the initial 12 POPs covered by the Convention with specific control measures and national obligations of Convention Parties. The Kyrgyz Republic signed the Convention in May 2002 and acceded to it in July 2006, becoming a formal party and assuming the obligations it entails. SAEPF is the responsible national authority. The main activity has been supervising the implementation of the required National Implementation Plan (NIP), which was supported by UNEP. The NIP was approved by Government Decree #371 in July 2006.
4. In general, the profile of PCB use and their residual presence in Kyrgyzstan are typical of that throughout the former Soviet Union. The chemical was never produced in Kyrgyzstan, but would have been imported primarily as a dielectric fluid in larger scale electrical equipment, mainly power transformers and capacitors, but also likely in smaller scale electrical devices such as ballasts in fluorescent lights and switches. The electrical equipment, which is anticipated to constitute the major source of PCBs in the country, would have been produced in other parts of the Soviet Union (Russian Federation, Kazakhstan, Armenia and Uzbekistan) between approximately 1958 and 1993. This would typically be equipment with well defined specifications identifiable by manufacturers labeling. Information on these specifications and labeling has been documented in other CIS countries. However, overall information on the quantities of PCBs or PCB containing equipment imported into the country is being clarified within the UNDP Management and Disposal of PCBs in Kyrgyzstan Project.
- 5.

**MINISTRY OF HEALTH OF THE KYRGYZ REPUBLIC
DEPARTMENT OF SANITARY EPIDEMIOLOGICAL SURVEILLANCE**

**Joint Statement of the Public Stakeholder Consultation Meeting
On discussion of the
Environmental Management Plan for the KG Health SWAp
(Published on the internet –<http://hpap.med.kg> on September 22, 2005)**

Participants:

1. Mr. Abdikarimov S.T, General Director, Department of Sanitary Epidemiological Surveillance/Deputy Chief Sanitary Doctor
2. Mr. Gusarov V.N, Director, United Directorate of Construction Enterprises, Ministry of Health
3. Mr. Isabekov G.A, Manager, Project Implementation Unit, Health SWAp PHRD, MoH
4. Mr. Sydykanov A.S, Public Health Component Coordinator, Health Sector Reform Project-II funded by the World Bank
5. Ms. Davydova L.N, Deputy General Director, DDPE
6. Ms. Kalygulova R., Head, Department of Ecological Expertise, State Agency of Ecology and Forestry under GoKR
7. Mr. Nurmatov Z.Sh., Head, State Epidemiological Surveillance Unit, DDPE Department
8. Ms. Vashneva N.S, Head Specialist, Pak S. – Director, Joint Office of the Director of Projects under Construction under the KR Ministry of Health
9. Ms. Abdrahmanova C., Head, Health Policy Analysis Department
10. Ms. Jumalieva G., Head, Hospital-Acquired Disease Prevention Center

Agenda:

Discussion of the Environmental Management Plan in the context of Health SWAp Project on Kyrgyz Health–Social Protection based on the sector wide approach to the Health Care Sector

Within the framework of the Draft National Program “Den sooluk” it is proposed to undertake repair and construction activities, and rehabilitation/renovation of Ministry of Health buildings, FAPs, FGPs, CSESs all over the country. It was therefore required to develop an Environmental Management Plan (EMP). The main objective of the EMP is targeted to exclude deterioration of the environment during the implementation of planned activities.

The EMP covers an area broader than just the investment financed by the World Bank and it will be a guiding document to address environmental issues in the health sector in general.

The EMP was in general approved by the stakeholders. It was agreed that the concerns raised during the meeting will be addressed in the project workplan, for which appropriate resources have been allocated, and the environmental issues specialist of the MoH/DDPE department would be responsible for supervision of any mitigation measures required. It was noted that the Plan envisages implementation of practical activities which do not contradict the Kyrgyz legislation about environment. There were clearly defined ecological components and sources of potential negative influence on the environment and measures to be undertaken to exclude deterioration of the environment. The EMP however assumes small influence on the environment since the scope of projected rehabilitation/renovation and construction activities will be of limited character.

The stakeholders made some comments and proposals on possible secondary use and sail of construction wastes together with construction wastes removal.

Furthermore, the stakeholders are also concerned with the problem of inefficient functioning and operation of sewerage clearing constructions and mechanisms for safe disposal of sewage coming out from the Health Institutions and creation of all necessary conditions to provide the population welfare. It was also proposed to outline the activities in accord with necessary scope of rehabilitation/renovation and construction works.

By the results of the discussion it was decided to approve the Draft Environmental Management Plan, which was confirmed by the signatures.

**ECA Safeguards
Rehabilitation and Construction Mitigation Measures Checklist
For Streamlined Environmental Management Plan**

For low-risk topologies, such as “public building” rehabilitation activities, the ECA safeguards team developed an alternative to the commonly used “full-text” EMP format. The **goal** was to provide an opportunity for a more streamlined approach to minor rehabilitation or small-scale building construction. The **intent** is that this EMP-checklist would be directly used as an integral part of bidding documents for contractors carrying out civil works under Bank-financed projects. The EMP-checklist-type format has been developed to provide examples of “good practices” for mitigation and designed to be user-friendly and compatible with Bank safeguard requirements. The EMP-checklist-type format attempts to cover typical core mitigation approaches to civil works contracts with localized impacts. It is anticipated that this format provides the core element of an Environmental Management Plan (EMP) to meet World Bank Environmental Assessment requirements under OP 4.01.

In terms of **process**, during preparation for projects in which the specific topologies and /or sites are not known a brief Environmental Management Framework would be prepared in compliance with OP 4.01 Annex C.² The EMP-checklist would be included as an annex in the EMF and recommended to be used as the Environmental Management Plan (EMP) for individual sub-activities once identified during the scoping identification phase. Once the typologies are identified, the application of the EMP-checklist is put in place. For each sub-activity in which the specific buildings/sites for rehabilitation, and/or demolition and complete reconstruction is known, the EMP-checklist is completed. The checklist has three sections:

- Part 1 includes the descriptive part that describes the project specifics in terms of the physical location, institutional arrangements, and applicable legislative aspects, the project description, inclusive of the need for a capacity building program and description of the public consultation process. This section could be up to two pages long. Attachments for additional information are requested if needed.
- Part 2 includes the environmental and social screening of potential issues and impacts, in a simple Yes/No format followed by mitigation measures for any given activity. Currently, the list provides examples of potential issues and impacts. This list can be expanded to specific site issues and /or impacts; and good practices and mitigation measures.
- Part 3 will include the monitoring plan for activities during project construction and implementation. It retains the same format required for current EMPs. It is the intent of this checklist that Part 2 and Part 3 be included as bidding documents for contractors.

The practical **application** of the EMP-checklist would include the filling in of Part 1 to obtain and document all relevant site characteristics. In Part 2 the type of foreseen works, would be checked, and the completed tabular EMP is additionally attached as integral part to the works contract and, analogous to all technical and commercial terms, that is signed by the contract parties. Part 3 of the EMP-checklist, the monitoring plan, is designated to construction inspector, for the Contractor’s

² Environmental Management Framework (EMF) : Introduction (Background, Project Objective, Project Description); Policy, Legal And Administrative Framework; Relevant World Bank Policies; Implementation Arrangements
Environmental Screening, Assessment and Management; and Monitoring And Reporting

safeguards due diligence compliance. This plan should be developed site specifically and in necessary detail, defining clear criteria and parameters which can be included in the works contracts, which reflect the status of environmental practice on the construction site and which can be observed/measured/ quantified/verified by the inspector during the construction works. Thus Part 3 would thus be filled in during the design process to fix key monitoring criteria which can be checked during and after works for compliance assurance. During the works implementation phase environmental compliance is checked on site alongside other quality criteria by the PIU's site certified inspector(s).

Site- Specific Environmental Management Plan Mitigation and Monitoring Plan Checklist for Construction and Rehabilitation Activities

PART 1: INSTITUTIONAL & ADMINISTRATIVE				
Country				
Project title				
Scope of project and activity				
Institutional arrangements (Name and contacts)	WB (Project Team Leader)	Project Management	Local Counterpart and/or Recipient	
Implementation arrangements (Name and contacts)	Safeguard Supervision	Local Counterpart Supervision	Local Inspectorate Supervision	Contactors
SITE DESCRIPTION				
Name of site				
Describe site location	Attachment 1: Site Map []Y []N			
Who owns the land?				
Geographic description				
LEGISLATION				
Identify national & local legislation & permits that apply to project activity				
PUBLIC CONSULTATION				
Identify when / where the public consultation process took place				
INSTITUTIONAL CAPACITY BUILDING				
Will there be any capacity building?	[] N or []Y if Yes, Attachment 2 includes the capacity building program			

PART 2: ENVIRONMENTAL /SOCIAL SCREENING			
Will the site activity include/involve any of the following potential issues and/or impacts:	Activity and examples of potential issues and/or impacts	Status	Additional references
		If Yes for any	
	1. Building rehabilitation <ul style="list-style-type: none"> • Site specific vehicular traffic • Increase in dust and noise from demolition and/or construction • Construction waste 	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section B below
	2. New construction <ul style="list-style-type: none"> • Excavation impacts and soil erosion • Increase sediment loads in receiving waters • Site specific vehicular traffic • Increase in dust and noise from demolition and/or construction • Construction waste 	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section B below
	3. Individual wastewater treatment system <ul style="list-style-type: none"> • Effluent and / or discharges into receiving waters 	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section C below
	4. Historic building(s) and districts <ul style="list-style-type: none"> • Risk of damage to known/unknown historical or archaeological sites 	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section D below
	5. Acquisition of land ³ <ul style="list-style-type: none"> • Encroachment on private property • Relocation of project affected persons • Involuntary resettlement • Impacts on livelihood incomes 	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section E below
	6. Hazardous or toxic materials ⁴ <ul style="list-style-type: none"> • Removal and disposal of toxic and/or hazardous demolition and / or construction waste • Storage of machine oils and lubricants 	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section F below
	7. Impacts on forests and/or protected areas <ul style="list-style-type: none"> • Encroachment on designated forests, buffer and /or protected areas • Disturbance of locally protected animal habitat 	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section G below
	8. Handling / management of medical waste <ul style="list-style-type: none"> • Clinical waste, sharps, pharmaceutical products (cytotoxic and hazardous chemical waste), radioactive waste, organic domestic waste, non-organic domestic waste • On site or off-site disposal of medical waste 	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section H below
	9. Traffic and Pedestrian Safety <ul style="list-style-type: none"> • Site specific vehicular traffic • Site is in a populated area 	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section I below

³ Land acquisitions includes displacement of people, change of livelihood encroachment on private property this is to land that is purchased/transferred and affects people who are living and/or squatters and/or operate a business (kiosks) on land that is being acquired.

⁴ Toxic / hazardous material includes and is not limited to asbestos, toxic paints, removal of lead paint, etc.

MITIGATION PLAN		
ACTIVITY	PARAMETER	GOOD PRACTICES MITIGATION MEASURES CHECKLIST
A. General Conditions	Notification and Worker Safety	<ul style="list-style-type: none"> (a) The local construction and environment inspectorates and communities have been notified of upcoming activities (b) The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works) (c) All legally required permits (to include not limited to land use, resource use, dumping, sanitary inspection permit) have been acquired for construction and/or rehabilitation (d) All work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. (e) Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots) (f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow.
B. General Rehabilitation and /or Construction Activities	Air Quality	<ul style="list-style-type: none"> (a) During interior demolition use debris-chutes above the first floor (b) Keep demolition debris in controlled area and spray with water mist to reduce debris dust (c) Suppress dust during pneumatic drilling/wall destruction by ongoing water spraying and/or installing dust screen enclosures at site (d) Keep surrounding environment (side walks, roads) free of debris to minimize dust (e) There will be no open burning of construction / waste material at the site (f) There will be no excessive idling of construction vehicles at sites
	Noise	<ul style="list-style-type: none"> (a) Construction noise will be limited to restricted times agreed to in the permit (b) During operations the engine covers of generators, air compressors and other powered mechanical equipment should be closed, and equipment placed as far away from residential areas as possible
	Water Quality	<ul style="list-style-type: none"> (a) The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers.
	Waste management	<ul style="list-style-type: none"> (a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities. (b) Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers. (c) Construction waste will be collected and disposed properly by licensed collectors (d) The records of waste disposal will be maintained as proof for proper management as designed. (e) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos)
C. Individual wastewater treatment system	Water Quality	<ul style="list-style-type: none"> (a) The approach to handling sanitary wastes and wastewater from building sites (installation or reconstruction) must be approved by the local authorities (b) Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment (c) Monitoring of new wastewater systems (before/after) will be carried out
D. Historic building(s)	Cultural Heritage	<ul style="list-style-type: none"> (a) If the building is a designated historic structure, very close to such a structure, or located in a designated historic district, notify and obtain approval/permits from local authorities and address all construction activities in line with local and national legislation (b) Ensure that provisions are put in place so that artifacts or other possible "chance finds" encountered in excavation or construction are noted, officials contacted, and works activities delayed or modified to account for such finds.
E. Acquisition of land	Land Acquisition Plan/Framework	<ul style="list-style-type: none"> (a) If expropriation of land was not expected and is required, or if loss of access to income of legal or illegal users of land was not expected but may occur, that the bank task Team Leader is consulted.

MITIGATION PLAN		
ACTIVITY	PARAMETER	GOOD PRACTICES MITIGATION MEASURES CHECKLIST
F. Toxic Materials	Asbestos management	<p>(b) The approved Land Acquisition Plan/Framework (if required by the project) will be implemented</p> <p>(a) If asbestos is located on the project site, mark clearly as hazardous material</p> <p>(b) When possible the asbestos will be appropriately contained and sealed to minimize exposure</p> <p>(c) The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust</p> <p>(d) Asbestos will be handled and disposed by skilled & experienced professionals</p> <p>(e) If asbestos material is be stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately</p> <p>(f) The removed asbestos will not be reused</p>
	Toxic / hazardous waste management	<p>(a) Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties and handling information</p> <p>(b) The containers of hazardous substances should be placed in an leak-proof container to prevent spillage and leaching</p> <p>(c) The wastes are transported by specially licensed carriers and disposed in a licensed facility.</p> <p>(d) Paints with toxic ingredients or solvents or lead-based paints will not be used</p>
G. Affects forests and/or protected areas	Protection	<p>(a) All recognized natural habitats and protected areas in the immediate vicinity of the activity will not be damaged or exploited, all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities.</p> <p>(b) For large trees in the vicinity of the activity, mark and cordon off with a fence large tress and protect root system and avoid any damage to the trees</p> <p>(c) Adjacent wetlands and streams will be protected, from construction site run-off, with appropriate erosion and sediment control feature to include by not limited to hay bales, silt fences</p> <p>(d) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.</p>
H. Disposal of medical waste	Infrastructure for medical waste management	<p>(a) In compliance with national regulations the contractor will insure that newly constructed and/or rehabilitated health care facilities include sufficient infrastructure for medical waste handling and disposal; this includes and not limited to:</p> <ul style="list-style-type: none"> ▪ Special facilities for segregated healthcare waste (including soiled instruments “sharps”, and human tissue or fluids) from other waste disposal: <ul style="list-style-type: none"> a. Clinical waste: yellow bags and containers b. Sharps – Special puncture resistant containers/boxes c. Domestic waste (non-organic): black bags and containers ▪ Appropriate storage facilities for medical waste are in place; and ▪ If the activity includes facility-based treatment, appropriate disposal options are in place and operational
I Traffic and Pedestrian Safety	Direct or indirect hazards to public traffic and pedestrians by construction activities	<p>(b) In compliance with national regulations the contractor will insure that the construction site is properly secured and construction related traffic regulated. This includes but is not limited to</p> <ul style="list-style-type: none"> ▪ Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards ▪ Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes. ▪ Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement ▪ Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public. ▪ Ensuring safe and continuous access to office facilities, shops and residences during renovation activities,

MITIGATION PLAN		
ACTIVITY	PARAMETER	GOOD PRACTICES MITIGATION MEASURES CHECKLIST
		if the buildings stay open for the public.

MONITORING PLAN						
Phase	What (Is the parameter to be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuous?)	Why (Is the parameter being monitored?)	Cost (if p
During activity preparation						
During activity implementation						
During activity supervision						