Community Development and Investment Agency of the Kyrgyz Republic (ARIS)
International Development Association

URBAN DEVELOPMENT PROJECT
Improving Seismic Resistance and Energy Efficiency of "Ak-
Tilek" kindergarten and Full Overhaul of Its Building

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

April 2018
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<th>Description</th>
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<tr>
<td>ACM</td>
<td>Asbestos-containing materials</td>
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<tr>
<td>BoQ</td>
<td>Bill of Quantities</td>
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<td>DASN</td>
<td>Architecture and Civil Engineering Supervision Department</td>
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<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>EMF</td>
<td>Environmental Management Framework</td>
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<td>ESMP</td>
<td>Environmental and Social Management Plan</td>
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<td>FS</td>
<td>Feasibility Study</td>
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<td>FL</td>
<td>Fuels and lubricants</td>
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<td>GETI</td>
<td>Environmental Protection and Technical Safety Inspection Department</td>
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<td>GKR</td>
<td>Government of the Kyrgyz Republic</td>
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<td>HBEI</td>
<td>Health-based exposure limits</td>
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<td>IDA</td>
<td>International Development Agency</td>
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<td>IEE</td>
<td>Initial Environmental Examination</td>
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<td>KR</td>
<td>Kyrgyz Republic</td>
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<td>KG</td>
<td>Kindergarten</td>
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<td>LR</td>
<td>Laws and regulations</td>
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<td>LGB</td>
<td>Local government bodies</td>
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<td>MPC</td>
<td>Maximum permissible concentration</td>
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<td>RGKR</td>
<td>Resolution of the Government of the Kyrgyz Republic</td>
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<td>SanPiN</td>
<td>Sanitation Rules and Regulations</td>
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<td>SPZ</td>
<td>Sanitary protection zone</td>
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<td>SW</td>
<td>Solid waste</td>
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<td>NAPP</td>
<td>Natural area of preferential protection</td>
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<td>TS</td>
<td>Top soil</td>
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<td>UDP</td>
<td>Urban Development Project</td>
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<td>WB</td>
<td>(the) World Bank</td>
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1. Introduction

1. The objective of Urban Development Project (UDP) supported by International Development Association (IDA) and the Kyrgyz Republic is to improve the quality of public services and pilot studies of energy efficiency and retrofitting directed at seismic resilience of urban infrastructure in participating towns. This objective would be obtained by mobilization of financial resources to (i) improve the quality of public services, such as water supply, solid waste management, and street lighting; (ii) implement pilot studies of energy efficiency and retrofitting directed at seismic resilience of social infrastructure, such as schools, and (iii) urban planning capacity building of Gosstroj (State Agency for Architecture, Civil Engineering, and Housing and Communal Services under the Government of the Kyrgyz Republic), and building of capacity of participating towns to provide local services.

2. Within the framework of the project, it is planned to improve water supply in the towns of Sulyukta and Kerben and assure energy efficiency and seismic resilience of priority schools and kindergartens in the towns of Balykchy and Toktogoul, as well as operate street lighting and collect solid waste in participating towns.

3. Environmental Management Framework (EMF) was developed for the project and published on ARIS website in the Kyrgyz Republic and info-shop of the World Bank on 2 Nov and 5 Nov 2015 respectively. EMF was consequently updated to account for social and gender aspects and published again on 2 Dec 2015. Environmental and Social Management Framework (ESMF) outlines the procedures and mechanisms used in project to provide compliance with Environmental Assessment Policy (4.01) of the World Bank, and laws and regulations of the Kyrgyz Republic for environmental requirements.

4. ESMF ensures sustainability of environmental and social activities of the project for the whole project cycle and provides adequate institutional, regulatory, and technical framework for maintenance staff and ARIS consultants with guidelines of processes and procedures to follow in cases below:
   (i) identification of environmental and social assessment measures, including assessment of conflict stressors and potential transboundary impact of project activities carried out under UDP;
   (ii) development of separate ESMFs for each sub-project with comprehensive measures for mitigation of social and environmental consequences, environmental monitoring and institutional responsibility combined into general project implementation plan by incorporating such kind of document into tender documents to ensure financing and supervision of sub-projects, as well as other components of sub-projects;
   (iii) identification of requirements to environmental monitoring and strengthening of organizational structure that helps the project to bring positive impact.

5. Environmental and Social Management Plan (ESMP) is developed for Energy Efficiency of Urban Infrastructure Project with project entity being “Ak-Tilek” kindergarten in the town of Balykchy. This ESMP gives the description of environmental impact and measures to be taken to mitigate the impact of reconstruction of “Ak-Tilek” kindergarten.

2. Geophysical Coverage of the Project Area

6. The town of Balykchy is oblast-subordination town which also includes Orto-Tokoy village as its constituent part. Total area of the town is 3357 ha, including residential settlements - 576,8 ha, and streets, roads, motor ways - 226, 5 ha. Total area of Orto-Tokoy village is 344 ha. Population size, including Orto-Tokoy village, as per 2012 census is 42875 thousand people or 10,1% of oblast population size.

7. The town of Balykchy is located at the western part of Issyk-Kul oblast on the borderline of Issyk-Kul, Chuy, and Naryn oblasts, 350 km away from Chinese border (Toroughart border checkpoint). The town is located 175 km south-west of Bishkek, the capital city of the Kyrgyz Republic, 180 km north of Naryn, capital city of Naryn oblast, and 220 km east of the town of Karakol, administrative center of Issyk-Kul oblast.

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1 Information portal of Issyk-Kul oblast (province) administration: http://gov.kg/iik/?page_id=39
8. Length of town is 10 km. Width of town is about 3.5 km. Southern boundary of the town borders with the lake (length of shoreline - 1607 m), and elevation of Kunghei Ala-Too mountains on the north border is between 1670-1680 m. The town of Balykchy is a flat land sloping towards south. Maximum slope 5-7%.

Fig. 1. The town of Balykchy at the map of the Kyrgyz Republic

3. Climate in Project Area

9. Climate in the town of Balykchy is continental. Soils of the town are stony and poor in humus and, when combined with arid climate, that means soils have extremely low natural biological productivity. Climate of the town of Balykchy can be specifically characterized by strong westerly winds called Ulan with the speed of 25-28 m/sec.

10. Precipitation, mostly, falls in the form of rain, and is hardly ever more than 100 mm a year. Snow falls rarely; number of snowfall days in a year is about 7-10 days, snow depth 5-8 cm. Water on the shore of the lake never freezes in winter.

Table 1. Average monthly and yearly temperature, °C

<table>
<thead>
<tr>
<th>Weather station</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>VI</th>
<th>VII</th>
<th>VIII</th>
<th>IX</th>
<th>X</th>
<th>XI</th>
<th>XII</th>
<th>Год</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balykchy</td>
<td>-4.0</td>
<td>-2.9</td>
<td>1.7</td>
<td>8.1</td>
<td>12.4</td>
<td>16.3</td>
<td>18.9</td>
<td>18.4</td>
<td>14.2</td>
<td>8.0</td>
<td>2.0</td>
<td>-1.7</td>
<td>7.6</td>
</tr>
</tbody>
</table>

4. State of Environment in Project Area

4.1. Air

11. Main source of air pollution in the town of Balykchy is vehicle emissions to air and emissions from solid fuel consumption in autumn and winter period used to heat houses. There are no industrial emissions from stationary sources of air pollution in the town.

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2 Building Climatology, Civil Engineering Rules and Regulations of the Kyrgyz Republic (СНиП КР) 23-02-00
4.2. Water Resources

12. The town of Balykchy is located on the northern shore of Issyk-Kul lake. While pollutants are not discharged directly into the lake in Balykchy area, there is still a risk that filtration surface of wastewater discharged from treatment plants (not those treatment plants for treating municipal wastewater, but those operating, in fact, as pumping stations) gets polluted. Fields designed for discharge of wastewater where it should be further filtered are used for purposes other than intended and serve as a wastewater storage site. Implementation of project will not affect the quality of water in Issyk-Kul lake.

4.3. Soil

13. Light-brown soils are prevalent in Balykchy. Light-brown desert soils are most extensive in proluvial and proluvial-alluvial deposits underlain by gravel and rock formations at the bottoms of Central Tien-Shan intermountain depressions at 1700-2400 m.a.s.l. in desert and steppe belt with sharply continental climate with maximum rainfall in summer and type of vegetation that grows in summer on carbon-bearing deluvial and proluvial clay loam soil, alluvial and proluvial-alluvial sandy and pebble deposits, including in Issyk-Kul depression.

4.4. Biodiversity

14. Vegetation in project area is typical for that of semi-deserta and mountain steppes. Various kinds of wormwood (artemisia), ephedra, needle grass (stipa), wheat grass (agropyron), festuca valesiaca, monkshood (aconitum altaicum), and many other kinds of ephemeral plants (tulips, crocuses, poppies) and shrubs like pea shrub (caragana arborescens), barberry (berberis), filipendula, honeysuckle (lonicera) grow there. There are few trees, and most of them are shrubs, e.g. junipers (juniperus) and crab apples (malus sylvestris).

15. Wild life in project area is represented by few species; it is not diverse except for reptiles. There are geckos (gekkonidae), turtles (testudines), monitor lizards (varanus), lizards (lacertilia), and snakes (serpentes). Mammals are represented by ground squirrels (spermophilus), jerboas (dipodidae), hamsters (cricketinae), hares (lepus), and black-tailed gazelles (gazella subgutturosa) and corsac foxes (vulpes corsac).

4.5. Nature Reserves (under Special Places Protection Act)

16. Project site (Ak-Tilek) is located at the town of Balykchy; this area belongs to Issyk-Kul biosphere reserve which is given the status of natural reserve in the Kyrgyz Republic. According to land-use zoning, the town of Balykchy is located in the transition zone where various kinds of industrial operations are allowed, as well as long-term use of natural resources in compliance with environmental requirements that provide sustainable environmental and economic development of the area. Croplands, agricultural and industrial facilities, health and fitness infrastructures, mineral water sources, and experimental sites with industrial facilities are in the transition zone.

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3 Nature and biodiversity of Central Tien-Shan. USAID Vulnerability Assessment of Biodiversity to Climate Change, 2015.
5 Biosphere Reserves Law of the Kyrgyz Republic
4.6. Cultural Heritage and Historical Monuments

17. There are no artifacts of historical and archeological significance at the project site.

4.7. Natural Disasters

18. Floods occur most often in the town of Balykchy among other natural hazards and disasters; these occur most often in the coastal zone of Issyk-Kul lake. Floods here are associated with rise of water level in Issyk-Kul lake and depth of groundwater level equal to 3 m below the ground surface.

19. The town of Balykchy and area adjacent to the town are located at the place where earthquakes of 7-9 magnitude can happen. To prevent population from natural disasters and mitigate the impact of natural disasters on population, environment and housing and utilities infrastructure, preventive measures are being taken by the Ministry of Emergencies and local authorities.

Fig. 3. Issyk-Kul oblast (province) seismic hazard sketch map, Institute of Seismology, National Academy of Sciences of the Kyrgyz Republic

5. About “Ak-Tilek” kindergarten

20. “Ak-Tilek” kindergarten is located in the center of Balykchy. The kindergarten is built in a central position in an outlying and flat parcel. The kindergarten area confines with other residential lots, but it is separated by fences and streets. The school area includes: the main building and other small units in the exterior playground. The paths are made of asphalt or concrete or there is just the ground.

21. The kindergarten hosts children from 2 to 4 years old. Current occupation is around 322 children and 20 teachers/staff.

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6 Ministry of Emergencies of the Kyrgyz Republic, On Hazardous Emergencies in Issyk-Kul oblast (province);
The building follows a typical design, constructed on the project #214-2-4c developed by Kyrgyz Giprostroy in 1975. The building has been constructed in 1981.

22. The building configuration is H-shaped plan; it consists of 3 regular-shaped building blocks separated by construction joints:
   - Block A: 2 floors with approximate dimensions of 35 m x 9 m (length x width)
   - Block B: 2 floors with approximate dimensions similar to Block A;
   - Block C: 2 floors with approximate dimensions 15 m x 3.5 m (length x width).

Fig. 2. Ak-Tilek kindergarten as seen on the map of the town of Balykchy

Fig. 3. Structure of Ak-Tilek kindergarten

23. Outside walls are made of bricks (thickness of 38 cm), covered with inner and outer plaster. The walls have no thermal insulation and partly damaged with cracks.

24. Roof with ceiling overlap. The roof is covered with corrugated asbestos sheets (asbestos cement sheet). The attic of the ceiling is made of reinforced concrete hollow-core slabs.

25. Basement is localized under part of the hallway of the central Block C and it is accessible just from the exterior and hosts a big system room.

26. Windows. All windows have been replaced in 2014 by low quality double-glazed and 2-chamber plastic frame windows (not energy-saving). The previous system of ventilation, designed for the building, is closed and non-operated.
27. The energy source for heating is electricity. The heating is carried out by one of two 160 kW electric boilers, located at the basement of block C. The heating system is more than 30 years old.

28. There are already enormous losses of the generated heat in the boiler house due to uninsulated pipelines of the central heating system and boiler losses. Total energy loss for generation of heat (in boiler) and transmission of heat (via boiler pipelines and consumption of energy by circulator pumps) is 7% energy consumed in boiler. The boiler operation is manually controlled according to estimated indoor and outdoor temperature. The operator manually stop the heat generation for keeping limited the power consumption, he manually does it by boiler switch on/off, there is no controller and no mixing valve (flow-return pipeline).

29. The closed central circulation system supplies hot water to the building through a distribution pipe system. The water supplies the radiators, which are made of cast-iron. The temperature of the water that reaches the radiators is very low due to the undersized heat system and it is obviously insufficient to provide the building with the necessary thermal needs.

30. The internal lighting system is clearly insufficient. All rooms under the lighting and have incandescent lamps, except for the toilet, in which during the repair were installed fluorescent lamps. There are 2 outdoor spot lightings with Mercury Vapor Bulbs (250 W), which are not currently operating. The entire emergency lighting is missing.

31. Electrical equipment and power distribution network. Generally the electrical system of the service rooms must be completely replaced. The control panels are in bad conditions; they lack appropriate protection and which is a violation of security requirements.

32. Water supply and waste water. The water system for household needs is fed to several parts of the structure. Toilets, kitchen, dressing rooms, dining room, etc. All premises have cold water coming from one centralized water supply system. Supply of hot water, where necessary is carried out by electric local water heaters. There is no hot water in the toilet.

33. At the first floor, the central Block C is filtered by 4 lateral units: 2 main entrances on the East side and 2 secondary ones on the West side. The main entrances have upper canopies which show maintenance deficiencies and roofs are made of asbestos sheets.

34. Secondary entries (West side - garden and playground) are rarely used, now they are used as storage facilities and serve as an external storage and laundry area. In addition, one of them does not have a canopy. Roof is made of asbestos sheets.

35. External fire escapes are placed one per sleeping room, and one per service area, at the first floor; at the second floor, they are placed laterally one per sleeping room and classroom, but they just are too much tight and steep metal stairs with unsafe handrails

36. In the framework of the project the seismic vulnerability assessment, carried out on the building in question, showed a medium-high seismic vulnerability, which will require certain design solutions to improve the seismic safety of the kindergarten building.

6. Measures to Improve Seismic Safety and Energy Efficiency of the Building

6.1. Improving Seismic Resistance of the Building

37. The following works will be carried out to improve the seismic resistance of buildings:
   - Reinforced Concrete Jacketing
   - Columns reinforcement with r.c. jacketing;
   - New load-bearing masonry wall;
   - Beams reinforcement with steel profiles and battens (beton plaque);
   - Masonry recovery of intersections;
   - Improving the existing roofing system.
6.2. Improving Energy Efficiency of the Building and Full Overhaul

38. The investigation revealed that the existing condition of the building does not meet the standards required for preschools. The investigation also revealed that some surface finishing materials are damaged inside and outside of the building.

39. Improving the technical characteristics of walls, ceilings, as well as windows, combined with the reconstruction of electrical and air conditioning systems, will be a key requirement for obtaining a good and correct result of energy efficiency.

40. Improving energy efficiency and structural safety of the Ak-Tilek kindergarten building can also be achieved by full overhaul of the building.

In the following, the main typologies construction works regarding improvement of energy efficiency and full overhaul of the building are outlined.

- Renovation of external staircases and installation of a new non-slip coating;
- Installation or replacement of new parapets in the exits and entrances;
- New design of the accessibility of related parts (accessible ramps and parapets);
- New wall coverings made of ceramic tiles.
- Renovation of the floor, replacement of the painted or damaged floor and a new wooden floor;
- Renovation of the floor, replacing the painted or damaged floor with a new ceramic tile floor;
- Replacement and installation of new doors;
- Replacement and installation of new customized doors for recesses and small warehouses;
- Replacement of old windows with installation of new PVC windows and windows sills;
- New plaster;
- New interior and exterior painting of all plastered walls and ceilings;
- New design for entrances and external paths;
- New metal fire escapes;
- New roofing with Corrugated Galvanised Iron sheets in place of asbestos sheets;
- New partitions;
- Partial restoration of masonry with the closure of localized holes for ventilation systems in load-bearing masonry.
- New ventilated ground floor structure. The existing floors, at ground level, is in very bad conditions and the connections regarding the bearing structures are not-engineered and, in particular, not appropriate for cyclic seismic actions. For these reasons, it needs to take into account for renewing the complete structure. The opportunity is good also to take advantage to implement measures for the reduction of heat energy transmission losses at ground floor. The works on installation of new floor structures at ground level will include, among other: removing the old floor structure; building masonry brick walls; placing the wooden planks on top of brick walls; placing the insulating panels (mineral wool); placing the wooden planks with selected topcoat.

7. Environmental Impact and Mitigation Measures

41. The expected problems would be limited to temporary inconveniences for local communities while construction works are under way and include the following: (I) more pollution because of construction waste; (II) dust, noise, and vibration because of the traffic created by heavy equipment and machinery; (III) risks associated with mismanagement of construction waste and asbestos, or small operational or emergency spill of oil and lubricants from heavy equipment; (IV) substandard rehabilitation of construction site after completion of works.

42. Existing toilets should be inspected for compliance with environmental and sanitary requirements. If outdoor toilets will not meet the requirements, it is necessary to carry out repairs, taking into account the work of design and estimate documentation. If the toilet is to be demolished, it is necessary to conduct its conservation taking into account measures aimed at preventing pollution of the environment and
observance of sanitary norms and rules. Measures for the preservation of the toilet, provided in the ESMP.

43. All potential environmental impacts are easily identified, occur in specific place, small in scale, have minimum impact and can be prevented effectively and minimized or mitigated by mentioning in labor contracts about specific measures that should be taken by contractors and supervised closely by ARIS. The use of construction materials is regulated by the Technical Regulation "Safety of buildings and structures", approved by the Law of the Kyrgyz Republic on June 27, 2011. No. 57. The use of asbestos is prohibited by the WB policy.

44. To mitigate impacts for the period of construction, Environmental Management Plan (Table 1) and Environmental Monitoring Plan (Table 2) have been developed. Expenses for mitigation of environmental impact and environmental monitoring would be considered in detailed design stage and tendering process.

45. ARIS would bear general responsibility for supervising that the measures specified in EMP are duly implemented. In addition, state control and monitoring will be carried out by the State Agency for Environmental Protection at both construction and operation stages.

7.1. Impact of Project on Climate Change

46. Energy efficiency of the building would be improved by thermal insulation of the building which contributes to reduce heat loss and greenhouse effect. No additional greenhouse gas emissions from fuel combustion are anticipated when building is used again. Planting of trees around kindergarten should be considered as mitigation measures.

7.2. Hazardous Waste Management

47. While construction works are under way, hazardous wastes that contain asbestos or mercury can be produced. Asbestos cement-containing wastes and materials can come in the form of asbestos sheets used for roofing of the building; also, there can be asbestos-cement pipes of parts of pipes. Fluorescent lamps used to light the building contain mercury.

48. Risks associated with asbestos exposure. Asbestos is a natural fiber material widely used in buildings and other infrastructure in XX century for its tensile strength and high resistance to fire and heat. Asbestos is usually used in corrugated roofing sheets and asbestos-cement pipes. All kinds of asbestos fibers contain risk for human health. Usually there is more risk in direct asbestos exposure or when asbestos-containing material is broken, such as broken edges of asbestos-cement pipes or broken segments of roofing sheets. That is why certain precautionary measures are required.

49. Mercury-containing waste management. Mercury is highly dangerous substance and is recognized to be one that has significant neurological and other adverse effect on human health. Based on the amount of mercury and the length of exposure, it may cause acute and chronic poisoning. Women and children are more sensitive to mercury poisonings.

7.2.1. Asbestos-containing Waste Management

50. Asbestos exposure risk is most likely to occur when wastes from asbestos roofing sheets and asbestos-cement pipes and their parts are transported to contractor for further utilization. Workers involved in asbestos-containing waste management are susceptible to risk of asbestos exposure.

51. Principles and guidelines of the World Bank for asbestos and asbestos-containing materials management declare that repair or removal or utilization of asbestos-containing materials should be carried out only by specially-trained staff.

52. Requirements of legislation of the Kyrgyz Republic for asbestos-containing materials management are binding for all types of work that involve asbestos-containing dust and apply on:
• use and application of asbestos-containing products and materials for technical needs;
• new construction, expansion, reconstruction, retrofitting and upgrade, repair, preservation and demolition of buildings, built using asbestos-containing materials;
• transportation and storage of asbestos as well as asbestos-containing materials and products;
• manufacturing and use of construction and road transport materials that are by products of mining and dressing of asbestos-containing ores;
• loading, unloading, ballast positioning and other works involving asbestos-containing ballast in repairing, maintenance, and construction of railways (side tracks or new railway lines), as well as storage and transportation requirements.

53. Fulfillment of these rules are binding on all legal entities, individuals and citizens that are involved in:
• construction, reconstruction, retrofitting and upgrade, as well as repair, preservation and demolition of building, facilities, installations, railways and motor roads and other special facilities using asbestos-containing materials;
• health care services provided for staff of workers exposed to asbestos and asbestos-containing materials because of their occupation.

7.2.2. Safety Rules for Handling Asbestos and Asbestos-Containing Materials

54. When there is asbestos on project site, it should be marked clearly as dangerous material. Cutting or breaking of asbestos-containing materials should be avoided as it leads to dust formation. At the time of reconstruction, all workers should avoid breaking/damaging asbestos-containing waste and store such kind of waste in specially designated places within construction site and dispose of them in duly manner at specially designated place or storage site.

55. If asbestos-containing waste is to be temporarily stored at project site, it should be stored in sealed containers and marked as dangerous material. Precautionary measures should be taken to prevent any unauthorized removal of such kind of waste from the site.

56. All asbestos-containing materials should be handled and disposed of by qualified and experienced staff only. This staff should wear PPE (masks, protective gloves and protective clothing). When handling asbestos waste, the staff should always wear special protective clothing, gloves, and face mask. Before asbestos is removed from the site (if required), special wetting agent should be used to minimize the release of asbestos dust. Removed asbestos shall never be used again.

57. Unauthorized personnel is not allowed on the territory of project site.
• Everyone working in asbestos production and use should be informed about its danger for health.
• All workers should be provided with PPE, including face mask, helmet, glasses, and safety boots.
• In loading and unloading of old roofing (asbestos sheet), hooks and other sharp tools are not allowed to avoid damaging roofing sheets.
• Drop of roofing sheets in asbestos from any height is not allowed in dismantling and loading and unloading works.
• In case roofing sheets in asbestos have been broken, damping of resulting waste is required to prevent from dust formation.
• Fine fibers of asbestos-cement waste should be collected into container and kept closed until it is transported from construction site.
• Transportation of asbestos-cement materials to disposal or storage sites should be carried out by automobile transport avoiding drops and damages;
• In case asbestos-containing materials fall or break on the road to disposal or storage site, that area should be cleaned from waste and the rest should be transported to disposal or storage site.
• After asbestos-containing waste is unloaded at disposal site, all exposed waste should be covered with 2 m earth.

7.2.3. Mercury-Containing Waste Management
58. All mercury-containing waste should be collected and returned to specialized factories for further regeneration of mercury. Only electricians and wiremen are allowed to perform work related to replacement and collection of used mercury-containing lamps after their knowledge of the subject is tested and after they are instructed about safety rules.

59. The main rule in replacement and collection of used mercury-containing lamps is to keep them airtight. Used mercury-containing lamps should be collected and stored in specially equipped premises. Mercury-containing waste should be stored in accordance with safety and sanitation rules.

60. Cardboard boxes out of fluorescent lamps, plywood boxes, pressed wood boxes, and PE and paper bags are used for collection and storage of used lamps. Used lamps and other mercury-containing waste that had been packed should be stored on shelves avoiding package damaging.

61. Collection and storage of waste. Broken mercury-containing lamps should be collected and stored in sealed steel container with handles and sign «For broken mercury-containing lamps». It is not allowed to break and take mercury-containing waste to disposal and other sites that are not designated for removal of hazardous waste.

62. Mercury-containing waste should be transported by special transport vehicle. In case there is no special vehicle, waste is transported by other transport vehicles that ensure no emergencies happen and no harm is done to environment and human health.

63. In transportation of mercury-containing waste, boxes should be shelved appropriately to avoid damaging of boxes on the road and prevent from leak of mercury and its spread all over the transport vehicles and the site. Broken lamps should be transported in sealed containers with handles. It is not allowed to drop boxes when loading. Boxes should be placed so that the most solid box is in the bottom row.

8. Social Impact

64. Construction of new buildings and facilities is not anticipated under the project. Project shall have a positive social impact, as reconstruction of the school building improves the safety of child care institution and creates more convenient sanitary and hygienic conditions for children and improves heat resistance of the building.

65. Positive impacts are: (a) improvement of energy efficiency of the existing kindergarten building can reduce heat and electric energy loss; (c) introduction of renewable sources of energy can ensure sustainable green development; (d) lessening of greenhouse effect. In general, positive social impact would include better standards of living in participating towns.

66. Apart from that, it is expected that there would be no essential potentially adverse environmental and social impacts, and any displays of such can be effectively prevented by corresponding preventive and/or mitigation measures. Social Impact Mitigation Plan has been developed for temporarily displaced people affected by project. This document provides the resettlement of children in other pre-school institutions for the period of works.

67. Potential impact in construction and operation stage is described in Table 1. Environmental monitoring is shown in Table 2.
### Table 1. Environmental and Social Management Plan

#### ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN
Improving Seismic Resistance and Energy Efficiency and Full Overhaul of Ak-Tilek kindergarten

<table>
<thead>
<tr>
<th>Environmental and social factors</th>
<th>Impact</th>
<th>Actions/measures proposed for mitigation</th>
<th>Institutional responsibility for mitigation measures/ actions</th>
<th>Cost of mitigation measures/ actions 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil</td>
<td>Leak detection</td>
<td>1) Proper selection of construction site and ensure that solid waste is collected there and provide safe toilets (possibly, bio toilets); 2) Timely cleaning of the site from petroleum products in case of leak onto the soil; 3) Prohibition of car and other machinery wash at construction site; 4) Refilling should be done at refill stations.</td>
<td>1. Contractor is responsible for implementation of environmental impact mitigation measures 2. Inspection of construction sites will be carried out by ARIS 3. State control by State Inspectorate for Environmental and Technical Safety</td>
<td>Not considered as a line item</td>
</tr>
<tr>
<td>Water resources</td>
<td>Leak of oil in the process of transport vehicle operation</td>
<td>Timely cleaning of the site from petroleum products to prevent them from being swept into local rivers and ground waters by rainfall.</td>
<td>1. Contractor is responsible for implementation of environmental impact mitigation measures 2. Inspection of construction sites will be carried out by ARIS 3. State control by State Inspectorate for Environmental and Technical Safety</td>
<td>Not considered as a line item</td>
</tr>
<tr>
<td>Air</td>
<td>Operation of automobile transport and heavy equipment</td>
<td>1) provide timely maintenance, and repair of vehicles and machinery in accordance with the requirements of original manufacturer’s brochure;</td>
<td>1. Contractor is responsible for implementation of environmental impact mitigation measures</td>
<td>Not considered as a line item</td>
</tr>
<tr>
<td>Activity</td>
<td>Description</td>
<td>Responsible Party</td>
<td>Considered as a line item</td>
<td></td>
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<td>-------------------------</td>
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<tr>
<td>Welding, insulation,</td>
<td>Proper storage and transportation of flammable and toxic materials (gas</td>
<td>1. Contractor is responsible for implementation of environmental impact mitigation measures</td>
<td>Not considered as a line item</td>
<td></td>
</tr>
<tr>
<td>and finishing</td>
<td>cylinders, bitumen-containing materials, paints, solvents, glass, and stone</td>
<td>2. Inspection of construction sites will be carried out by ARIS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masonry</td>
<td>Dust should be damped down by spraying water while performing demolition and</td>
<td>1. Contractor is responsible for implementation of environmental impact mitigation measures</td>
<td>Not considered as a line item</td>
<td></td>
</tr>
<tr>
<td></td>
<td>masonry works.</td>
<td>2. Inspection of construction sites will be carried out by ARIS</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>3. State control by State Inspectorate for Environmental and Technical Safety</td>
<td></td>
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</tr>
<tr>
<td>Loading and</td>
<td>Reduce dusting by damping it down.</td>
<td>1. Contractor is responsible for implementation of environmental impact mitigation measures</td>
<td>Not considered as a line item</td>
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<tr>
<td></td>
<td></td>
<td>2. Inspection of construction sites will be carried out by ARIS</td>
<td></td>
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<td></td>
<td></td>
<td>3. State control by State Inspectorate for Environmental and Technical Safety</td>
<td></td>
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<tr>
<td>Description</td>
<td>Details</td>
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</tr>
<tr>
<td>unloading</td>
<td></td>
<td>implementation of environmental impact mitigation measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burning waste at construction site</td>
<td>It is not allowed to burn industrial and domestic waste at construction site.</td>
<td>1. Contractor is responsible for implementation of environmental impact mitigation measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial (construction) and domestic waste</td>
<td>Site organization. Execution of construction works. Pollution and contamination of the neighbourhood, soil pollution, possible contamination of water resources</td>
<td>1. Contractor is responsible for implementation of environmental impact mitigation measures</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>1) To identify ways of collecting and removing waste, as well as sites for disposal of demolition and construction waste before starting with construction works. 2) Mineral waste left after construction and demolition of buildings should be collected separately from regular waste, and organic, liquid and chemical waste by waste sorting on construction site; after waste is sorted, it should be placed in special containers. 3) All materials and documents related to removal and disposal of waste should be kept in due order as an evidence of proper waste management at project site. 4) Whenever possible, contractor should</td>
<td>2. Inspection of construction sites will be carried out by ARIS 3. State control by State Inspectorate for Environmental and Technical Safety</td>
<td></td>
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<td></td>
<td></td>
<td>Not considered as a line item</td>
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</tbody>
</table>

Not considered as a line item
| Noise                      | Noise from air compressors and hammers | 1) Use of shaking devices that meet the standards, as well as anti-vibration and noise attenuation devices, etc.  
2) Covers of engines, air compressors, and other drive mechanisms should be kept closed while under operation; equipment should be installed at a place which is as remote from residential settlements as possible.  
3) Noise from construction works should be temporary and limited to certain hours. | 1. Contractor is responsible for implementation of environmental impact mitigation measures  
2. Inspection of construction sites will be carried out by ARIS  
3. State control by State Inspectorate for Environmental and Technical Safety | Not considered as a line item |
|--------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------|
| **Wildlife and vegetation** | Cutting of trees is not expected.  
Influence on flora and fauna will not be provided. | **Social Environment**                                                                 | **Environmental and Technical Safety** |
| **Aesthetics and landscape** | Ruin of landscape can be associated with accumulation of construction waste | After construction works are completed, planning and rehabilitation works should be organized at school neighborhood area. | Not considered as a line item |
| **Biological Environment** | | | |
| **Social Environment** | | | |
| Historical and cultural artifacts | Occupational injury is possible | Occupational health and safety, as well as health and safety of local population | Possible access of the local population to construction site | 1) Local inspection agencies supervising construction works and ensuring environmental safety, as well as local population should be duly informed about planned project activities.  
2) Local population should be duly informed about planned project activities via publications and/or announcements in mass media and/or information boards at public places (including, project site).  
3) All permits required by the legislation have been obtained (namely, permits for operations use of natural resources, and disposal of waste, as well as permit from Environmental inspection agency, etc.) for construction and rehabilitation works at the site.  
4) All works shall be implemented in a safe and disciplined way and shall be organized in such a way as to minimize negative impact of production process on local population and the environment.  
5) Personal protective equipment of workers should meet operational safety standards (including mandatory helmets, face mask, where necessary, protective glasses, safety belt, and protective boots).  
6) Corresponding direction signs and information boards shall be installed at the site, informing the workers about basic work rules and standards that should be followed. | 1. Contractor is responsible for implementation of environmental impact mitigation measures  
2. Inspection of construction sites will be carried out by ARIS  
3. State control by State Inspectorate for Environmental and Technical Safety | Not considered as a line item |

<table>
<thead>
<tr>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Environment</td>
</tr>
<tr>
<td>Soil</td>
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<tr>
<td>Water resources</td>
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<td></td>
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<tr>
<td>Air</td>
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<tr>
<td>Wildlife and vegetation</td>
</tr>
<tr>
<td>Aesthetics and landscape</td>
</tr>
<tr>
<td>Historical and cultural monuments</td>
</tr>
<tr>
<td>Population safety</td>
</tr>
</tbody>
</table>
Table 2. Environmental Monitoring Plan

Environmental Monitoring Plan

Improving Seismic Resistance and Energy Efficiency and Full Overhaul of Ak-Tilek kindergarten

<table>
<thead>
<tr>
<th>Sub-projects implementation stage</th>
<th>Which factor should be monitored</th>
<th>Where it should be monitored?</th>
<th>How it should be monitored? / what kind of equipment required for monitoring</th>
<th>When? (how often it is measured)</th>
<th>Cost of monitoring 1</th>
<th>Institutional responsibility for monitoring</th>
<th>(Dates) Start</th>
<th>(Dates) End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Noise</td>
<td>On construction site</td>
<td>Portable device for measuring level of noise (noise meter)</td>
<td>Always</td>
<td>Not considered as a line item</td>
<td>1. Construction site is inspected by ARIS for compliance with ESMP. 2. State inspection agents of DASN (Architecture and Civil Engineering Supervision Department) shall supervise implementation of design solutions of construction and</td>
<td></td>
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</tr>
<tr>
<td>Operation</td>
<td>site and disposal site</td>
<td>with the plan but minimum weekly</td>
<td>installation works during reconstruction, as well as quality of construction materials and structures. These agents shall take part at commissioning of complete construction facilities.</td>
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<tr>
<td>Soil pollution</td>
<td>On construction site</td>
<td>Visual inspection and by measurement devices</td>
<td>Always</td>
<td>3.GETI that is responsible for environmental supervision can organize supervision in accordance with established procedures after corresponding identification documents are presented as per environmental rules and regulations, as well as environmental protection actions developed within project implementation period.</td>
<td></td>
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<tr>
<td>Site decommissioning</td>
<td>On construction site</td>
<td>Visual inspection</td>
<td>In accordance with the plan</td>
<td>3.GETI that is responsible for environmental supervision can organize supervision in accordance with established procedures after corresponding identification documents are presented as per environmental rules and regulations, as well as environmental protection actions developed within project implementation period.</td>
<td></td>
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<tr>
<td>Trees and shrubs</td>
<td>On and around construction site</td>
<td>Visual inspection</td>
<td>Always</td>
<td>3.GETI that is responsible for environmental supervision can organize supervision in accordance with established procedures after corresponding identification documents are presented as per environmental rules and regulations, as well as environmental protection actions developed within project implementation period.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel safety</td>
<td>On construction site</td>
<td>Visual inspection</td>
<td>Always</td>
<td>3.GETI that is responsible for environmental supervision can organize supervision in accordance with established procedures after corresponding identification documents are presented as per environmental rules and regulations, as well as environmental protection actions developed within project implementation period.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Operation</td>
<td>Air</td>
<td>At sanitary protection zones of schools</td>
<td>Portable measurement devices</td>
<td>financed by GETI (Environmental Protection and Technical Safety Inspection Department)</td>
<td>3.GETI that is responsible for environmental supervision can organize supervision in accordance with established procedures after corresponding identification documents are presented as per environmental rules and regulations, as well as environmental protection actions developed within project implementation period.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Waste disposal and storage</td>
<td>At school and around it</td>
<td>Visual inspection</td>
<td>Always</td>
<td>financed by Project owner</td>
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</tr>
<tr>
<td>Trees and shrubs</td>
<td>At school</td>
<td>Visual inspection</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Safety of students</td>
<td>At school</td>
<td>Fire safety</td>
<td>Always</td>
<td></td>
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</tr>
</tbody>
</table>

Documents are presented as per environmental rules and regulations, as well as environmental protection actions developed within project implementation period.

1. Inspection organized by ARIS
2. GETI that is responsible for environmental supervision can organize supervision in accordance with established procedures after corresponding identification. Documents are presented as per environmental rules and regulations, as well as environmental protection actions developed within project implementation period.
9. Legislative Framework

68. Basic principles of natural resources management and environmental management to ensure favourable conditions of living are provided in the Constitution of the Kyrgyz Republic (art. 48), including liability and the level of compensation for damage. Legal framework for natural resources management and environmental management has been developed in Kyrgyzstan for regulation of legal relationships between consumers and the state. The existing legislation regulates protection and use of all kinds of natural resources: land, water, air, biodiversity, and mineral resources.

69. The legislation provides the following kind of regulation procedures and mechanisms: main rules and regulations for management of resources, including rules and regulations for natural resource management and environmental pollution charges, as well as environmental monitoring, impact assessment, environmental standards, environmental examination, environmental control, etc.

70. Basic laws regulating natural resource management, environmental protection, and the need for environmental impact assessment in the Kyrgyz Republic are:
   (i) Environmental protection law (1999);
   (ii) Environmental examination law (1999);
   (iii) Environmental Safety Regulations in the Kyrgyz Republic (2009);
   (iv) Drinking Water Safety Regulations (2011);
   (v) Law concerning Waste generated by Production and Consumption Activities (2001);
   (vi) Law concerning Sustainable Development of Issyk-Kul Environmental and Economic System (2004);
   (vii) Law concerning Biosphere Reserves in the Kyrgyz Republic (1999)
   (viii) no. 623 Government Decree of the Kyrgyz Republic dated from 25 Sep 1998 on founding Issyk-Kul biosphere reserve;
   (ix) Disease control and prevention requirements to organization of learning process in general education schools established by no. 201 Government Decree of the Kyrgyz Republic dated from 11 Apr 2016, Disease control and prevention rules and regulations;
   (x) Disease control and prevention requirements to organization of working process in pre-school educational institutions established by by no. 201 Government Decree of the Kyrgyz Republic dated from 11 Apr 2016, Disease control and prevention rules and regulations;
   (xi) Other laws regulating protection and management of natural resources.

71. Framework laws require development of agency rules and regulations. Environmental quality standards are established by administrative orders registered in the Ministry of Justice of the Kyrgyz Republic. Rules and regulations approved by documents that have less enforceable power than government decrees are no longer valid because of law concerning rules and regulations (2009). They are still legally non-binding and are only recommendations. Ministries, state committees, administrative agencies, and other government agencies and local authorities can issue non-binding acts only in terms of technical regulations.

72. Environmental quality regulations and standards establish quantitative indicators for quality of surface and ground water, air, land resources and noise level in residential settlements and industrial zone, as well as procedures for sampling and measuring.

73. Kyrgyz Republic is a party to 13 international environmental Conventions and 3 Protocols. Environmental Protection Law ensures that international agreements are applied.

74. Law concerning Public Regulation and Greenhouse Gas Emission and Absorption Policy (2000), which was adopted in the Kyrgyz Republic in 2017 to implement the United Nations Convention on Climate Change, establishes the framework for public regulation and specifies operating procedures, rights, obligations and responsibilities of the state bodies, local authorities, individuals and legal entities in the area of greenhouse gas emission and absorption in the Kyrgyz Republic.

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7 art. 36, no. 241 Law concerning Rules and Regulations dated from 20 July 2009;
8 art. 3, no. 67 Law of the Kyrgyz Republic concerning Technical Regulations dated from 22 May 2004;
75. **Environmental Protection Law** is a framework law and establishes basic principles of environmental protection, including the requirement to provide Environmental Impact Assessment report before implementation of the project is started. It also contains brief basic descriptions of the main regulated aspects which forms the base for development of new legal tools in specific environmental protection domains.

76. **Environmental Examination Law** provides detailed procedures for environmental examination and environmental impact assessment and includes both existing and new environmental protection programmes, plans and legislation. It is directed at prevention of negative impacts of economic or other activities on human health and environment and ensuring that such activities meet environmental requirements of the country.

77. **General Environmental Safety Regulations in the Kyrgyz Republic** define main environmental safety rules and establish general environmental safety requirements for production, storage, transportation and disposal of product on operational and other facilities. Requirements set out by this regulation are enforceable within the Kyrgyz Republic and govern product production, storage, transportation and disposal processes and binding on all legal entities and individuals involved in these activities.

78. **Public Health Care Law** is directed at better health of population by better access to public health services, promotion of health and safety issues, in general. According to Public Health Care Law, potable water should be safe and conform to technical regulations of the Kyrgyz Republic approved in accordance with legally established procedures of the Kyrgyz Republic. Water-bearing bodies should be safe in terms of disease control and prevention, radiation, and physical and chemical properties and meet the requirements set out in technical regulations and other laws and regulations approved in accordance with legally established procedures of the Kyrgyz Republic.\(^9\)

79. **Safe Potable Water Regulation** adopted in accordance with Technical Regulation Law of the Kyrgyz Republic is a regulatory document that establishes the requirements mandatory for use and fulfillment by regulated entities. The objectives of Safe Potable Water Regulation are the following:

- prevention of human health and life from negative impact of pollutants present in drinking water;
- prevention of consumers from fallacies when using drinking water

80. This Regulation shall apply to potable water designed to meet the requirements of population and shall regulate the principles, liabilities, procedures and organizational measures to ensure safe potable water. This Regulation is binding on all individuals and legal entities involved in financial and operational activities (industrial, agricultural, and other institutions) and operating water supply systems.

81. **Law concerning Sustainable Development of Issyk-Kul Environmental and Economic System** is directed at regulation of relationships connected with maintenance, use, and development of Issyk-Kul environmental and economic system

82. **Biosphere Reserves Law** establishes legal framework for foundation and operation of biosphere reserves in the Kyrgyz Republic. To account for salience of the environmental component in sustainable human development strategy and to attract foreign investments to profitable and eco-oriented economy and service field of Issyk-Kul oblast (province), **Issyk-Kul biosphere reserve was established by no. 623 Government Decree dated from 25 Sep 1998**

83. **Disease control and prevention requirements to organization of learning process in general education schools**, established by no. 201 Government Decree of the Kyrgyz Republic dated from 11 Apr 2016, are directed at health care of students studying in general education institutions. Disease control and prevention rules apply to general education institutions that are being designed, that already

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exist, that are under construction and rehabilitation, irrespective of ownership, and that provide primary and secondary general education and secondary (complete) general education.

84. **Disease control and prevention requirements to organization of working process in pre-school educational institutions** are directed at health care of children in the process of providing training, learning, development and health care in pre-school educational institutions, irrespective of form of incorporation and ownership.

85. **Requirements of legislation of the Kyrgyz Republic for hazardous waste management.** In accordance with no. 885 Government Decree of the Kyrgyz Republic dated from 28 Dec 2015, establishing rules and procedures for hazardous waste management in the Kyrgyz Republic, asbestos-containing and mercury-containing wastes should be disposed in accordance with environmental safety requirements.

86. **Safe Buildings and Facilities Regulation** adopted by no. 57 Law of the Kyrgyz Republic dated from 27 Jun 2011 establishes the requirements to be followed in designing (including engineering surveys), construction, operation, full overhaul, reconstruction, remodelling, and demolition of buildings and facilities;

2) sets out requirements to public utilities system of buildings and facilities;

3) defines rules and procedures for compliance with building safety requirements.

This Regulation shall apply to residential and municipal buildings and facilities, as well as industrial, water supply, rural and municipal services buildings and facilities, transportation and communication facilities, energy facilities, and hydraulic engineering and irrigation facilities that are built in the Kyrgyz Republic.
10. Public Hearings

87. According to Operational Policy OP 4.01\textsuperscript{10} there are special requirements of the World Bank for information disclosure and public hearings. Information disclosure includes informing the affected wider audience and population and other stakeholders about the project, starting from the earliest project cycle and covering the whole duration period of the project. Idea behind disclosing information is to foster positive cooperation with affected population and stakeholders for the entire period of project implementation.

88. Besides, Kyrgyz Republic is a member to Aarhus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters, as well as to European Economic Community of the United Nations, which also provides for disclose of intents and environmental objectives of the project.

89. Public hearings at the town of Balykchy were held on 24 Nov 2017. 36 people in total took part at public hearings; these are delegates of administration of the town of Balykchy and schools, student parents, design engineers, and ARIS agents. Engineering solutions of project and its environmental and social impact and prevention and mitigation measures were discussed at public hearings. See Minutes of Public Consultation Meeting attached.

11. Complaints mechanism

90. At the ARIS level, there is a single system for processing complaints and appeals from citizens. An operational manual (regulation) has been developed, which contains procedures for handling appeals and complaints, responsibilities among ARIS officials have been distributed, and verification control measures have been described. All applications and complaints of citizens that will be received under the PGR will be sent to a single system for further processing and control.

91. The grievance mechanism is provided to project participants for questions, comments, suggestions and/or complaints, or any form of feedback on all activities funded by the project and ARIS.

92. Beneficiaries of the project; persons affected by the project (that is, those who will and/or can be affected by the project directly or indirectly, positively or negatively), and the general population can use the CM to file complaints either verbally or in writing.

\textsuperscript{10}The World Bank Operational Policy OP 4.01, Environmental Assessment, section 3
12. Minutes of Public Consultation Meeting held in the Town of Balykchy

Протокол консультаций с общественною по вопросам охраны окружающей среды в рамках проекта Всемирного Банка «Проект городского развития» (ПГР) компонент «Энергетическая эффективность и сейсмическая устойчивость приоритетных школ и детских садов в г. Балыкчы»

24 ноября 2017 г.

г. Балыкчы

Присутствовали со стороны Проекта:

Уметов Б.У. – Старший инженер «Проекта городского развития», АРИС
Чонов У. – специалист по ООС «Проекта городского развития», АРИС
Айтматова Д. – консультант по охране окружающей среды, CAIC- суб-консультант ALL INGEGNERIA и AIRES INGEGNERIA

Присутствовали со стороны местного сообщества: список прилагается.

В общественных слушаниях приняли участие 36 человек: администрация города – Вице-мэр, глава Городского Кенеша, представители администраций школ, детских садов, родительских комитетов школ и детских садов.

Председатель собрания – координатор «Проекта городского развития» (АРИС) Уметов Б.У.

Со вступительным словом выступил Табалиев А. - вице-мэр города Балыкчы. В своем выступлении он отметил, что выполняемый проект имеет очень большое значение для города.

Координатор ПГР от АРИС Уметов Б.У. Он рассказал о целях и задачах проекта. В целом, отметил он, что этот проект состоит из ряда пилотных под-проектов, включающих ремонт школ и детских садов, преобразование сейсмических характеристик зданий, их энергоэффективность. Он пояснил, что ПСД уже готова, в разработке которого принимала участие итальянская компания и местная инженерная компания «Промпроект». Затем он кратко пояснил, что экологические аспекты имеют большое значение не только при реализации данного проекта, но и в целом, при реализации проектов по всей стране. После этого слово было предоставлено экологу проекта.

Айтматова Д. консультант проекта (CAIC) выступила с презентацией по воздействию проекта на окружающую среду.

Задача оценки окружающей среды заключается в том, чтобы выявить воздействие предлагаемого проекта на окружающую среду, определить соответствующие превентивные меры и меры по смягчению воздействия направленные на предупреждение, минимизацию или устранение любого ожидаемого необратимого воздействия.

Основополагающие принципы управления природными ресурсами, окружающей средой в целях обеспечения благоприятных условий для жизни человека, определяя ответственность и возмещение причиненного вреда, заложены в Конституции Кыргызской Республики (ст.48). В Кыргызстане разработана правовая база, обеспечивающая текущее управление природными ресурсами и средой и регулирующая правовые взаимоотношения между пользователями природы и государством. Действующее законодательство регулирует охрану и использование всех видов ресурсов: земли, воды, воздуха, биоразнообразия, минеральных ресурсов.
Опыт предыдущих проектов показывает положительное воздействие предлагаемого проекта на окружающую среду. В действительности, в ходе оценки окружающей среды выявлено много положительных воздействий проектов.

- Повышение энергоэффективности выбранных объектов за счет капитального ремонта;
- Безопасность выбранных школ и детского сада за счет повышения сейсмоустойчивости;
- Улучшение социальной среды за счет повышения гигиены и комфорта для детей.

Вместе с тем, при проведении строительных работ, возможно проявления некоторых потенциально негативных воздействий на охраны окружающей среды в проектных площадях, на которые необходимо обратить внимание, принять предупредительные действия и соответствующие меры по их смягчению во время планирования, разработки, строительства, эксплуатации и технического обслуживания.

Воздействие на окружающую среду будут носить локальный характер по месту и ограничены по времени.

Для предотвращения или смягчения негативного воздействия строительства для каждого объекта реабилитации составляется ПУОС. Он включает в себя план смягчающих мер и мониторинга, как для фазы строительства, так и для фазы Э и ТО.

Все риски фазы строительства легко контролируются и устраняются. Они могут быть сведены к минимуму при должном проектировании смягчающих мер и контроле над Подрядчиком при выполнении работ.

Вопросов и комментариев по экологической части не было.

После этого, слово взял Уметов Б.У., который поблагодарил докладчика и всех присутствующих за участие в общественных слушаниях.

Далее обсуждение перешло в социальную плоскость. Присутствующие выразили желание узнать, каким образом будет выполняться учебный план для учащихся. Уметов Б.У. сообщил, что мобилизация учеников без отрыва от учебы была бы самым лучшим вариантом. У нас есть вопросы, которые мы должны решать совместно и подготовить соответствующие планы и документы.

Затем выступил эколог АРИС – Улан Чонов. Он сообщил, что учителя, работающие в школах, где будет производиться ремонт, не должны потерять свою работу. Он сказал, что АРИСом был разработан план смягчения негативных социальных последствий, связанных с временной потерей рабочих мест учителями в связи с проведением ремонтных работ в 2 школах. Ни это будет. Необходимо подготовить много документов, приказов, исключающих конфликты между учителями и администрацией школ.

Директор школы имени Манаса в своем выступлении отметила, что в столовой школы, где появляются ученики других шкал, на времена ремонт, все ученики не будут помещаться. Кроме того, есть такая вешь, как коммунальные услуги – отопление, Интернет, телефон, электроэнергия, на которых была некоторая экономия средств. Теперь экономия не будет, потому что школы, которые примут новые группы учеников, будут работать в 2-3 смены. Затем, сказала она, у нас есть классы, в плохом состоянии, они закрыты сейчас, но их надо ремонтировать, на это тоже нужны деньги.

Уметов Б.У. порекомендовал, что все нужные шаги, которые надо выполнить, необходимо протоколировать и обращаться с документами в АРИС и мэрию.
Представитель Горкенеша Шакиров М.: На счет коммунальных расходов – не беспокойтесь. Мэрия взяла на себя расходы по транспорту детей в школу (1-4 классы). Будет автобус, который будет развозить детей.

Представитель родительского комитета: Когда начнутся строительные работы?

Уметов Б.У.: Работы начнутся весной. Сейчас идет разработка чертежей и ПСД.

Представитель мэрии: За год у нас закончится ремонт в одной школе?

Уметов Б.У.: Рассказал о содержании работ, что в школах будет базальное утепление, будут установлены теплоносители. Мы даже уверены, - сообщили он, - что за год в одной школе мы уложимся с выполнением работ. Замена кровли – пока на рассмотрении. 28 малых городов есть в КР. Если этот проект пройдет успешно, он станет эталонным и мы будем и в остальных малых городах производить ремонт социальных объектов – школ и детских садов.

Чонюев У.: По поводу плана смягчения социальных последствий. Мы уже работаем над решением проблем социального характера с октября месяца. На следующей неделе мы встречаемся с Министерством Образования и будем с ними обсуждать дальнейшие шаги.

Вице-мэр: Надо вместе работать и решать наши вопросы. До 1 декабря еще есть неделя. Поблагодарила АРИС, Уметова Б.А. и всех присутствующих за встречу и высказанные мнения.

Председатель Горкенеша: Также поблагодарил всех за участие в общественных слушаниях.

На этом общественные слушания были заключены.

Председатель: 

Уметов Б.

Консультант по охране окружающей среды: 

Айтматова Д.
Minutes of Public Consultation Environmental Meeting held under Urban Development Project of the World Bank, Energy Efficiency and Seismic Resistance of Priority Schools and Kindergartens in the town of Balykchy

24 Nov 2017

Balykchy

Attended by:

(project team)
Oumetov B. U. – Chief engineer, Urban Development Project, ARIS
Chonoyev U. – Environmental Specialist, Urban Development Project, ARIS
AitmatovaDzh. – Environmental Consultant, CAICo, All Ingegneria and Aires Ingegneria sub-consultant

(local community)
See attendance list attached.

36 people in total took part at public hearings; these are delegates of administration of the town of Balykchy represented by Vice-mayor and the Chairman of the Town Council, as well as representatives of school administrations, school and kindergarten parent-teacher-student associations.

The Chairman of the Meeting was Mr. Oumetov, Coordinator of Urban Development Project (ARIS)

Mr. Tabaldiyev, the Vice-mayor of the town of Balykchy, made introductory speech. He highlighted the importance of the project for the town.

Urban Development Project coordinator, Mr. Oumetov: He outlined aims and objectives of the project. In general, he said that the project was composed of several pilot sub-projects that involve repair of school and kindergarten buildings, improving seismic resistance of buildings and improving their energy efficiency. He added that design specifications and cost estimates have already been prepared by Italian company and local engineering company called Promprojekt. He also added that environmental aspects were very important for implementation of all projects across the country and not only this project. After that, the floor was given to environmental expert of the project.

AitmatovaDzh., environmental consultant (CAIC), delivered ppt presentation about impact of project activities on environment.

The aim of environmental impact assessment is to reveal the impact of the project on environment, identify corresponding preventive and mitigation measures oriented at prevention, minimization, and elimination of any irreversible environmental impact.

Basic principles of natural resources management and environmental management to ensure favourable conditions of living are provided in the Constitution of the Kyrgyz Republic (art. 48), including liability and the level of compensation for damage. Legal framework for natural resources management and environmental management has been developed in Kyrgyzstan for regulation of legal relationships between consumers and the state. The existing legislation regulates protection and use of all kinds of natural resources: land, water, air, biodiversity, and mineral resources.

Prior project experience shows positive environmental impact of the project. In fact, many positive environmental impacts of the project were revealed in the process of environmental impact assessment.

- Improvement of energy efficiency of these buildings after full overhaul;
- Seismic safety of schools and kindergartens due to higher seismic resistance;
Better social environment due to better hygienic conditions and more convenience for children.

Some negative environmental impact can possibly be seen at project sites during construction works. These should be taken care of by taking preventive and corresponding mitigation measures in planning, development, construction, operation, and maintenance.

Environmental impacts shall be of localized nature limited to space and time.

To prevent or mitigate the negative impact of construction, Environmental Management Plan is developed for each facility under rehabilitation. It includes mitigation measures and monitoring plan both for construction and O & M stage.

All construction stage risks are easily prevented and eliminated. They can be minimized given that due mitigation measures were taken, and proper supervision of construction works was performed.

After that, the floor was given to Mr. Oumetov who thanked the speaker and all those attending the public hearings.

And social issues were discussed. The audience wanted to know what’s the study plan for students. Mr. Oumetov explained that the best option would be to mobilize students without having to cancel classes. He also added that they had some issues that should be settled by mutual consent, and that corresponding plans and documents should be prepared.

After that, Mr. Chonoyev, ARIS environmental specialist, gave speech. He informed that teachers who work at schools under rehabilitation should not lose their jobs. He stated that a plan was developed by ARIS to mitigate negative social impacts associated with temporary unemployment of teachers due to repair of the buildings of those two schools. In addition to that, a lot of official documents and administrative orders should be developed to exclude the possibility of conflict between teachers and school administration.

The headmaster of Manas School highlighted in her speech that there is not enough space in the school canteen for all students, including those from another school that would be dining here while the building is repaired. Apart from that, charges for utilities services (heating, internet, telephone, power supply) should be considered, and they used to cut expenses and save money previously. Now, they can’t save money because schools that take on new groups of students would have to work for 2 or 3 shifts. Besides, she said, they had classrooms that are in a very poor condition and are not used at the time, and these should be renovated, and this takes money.

Mr. Oumetov recommended that all required actions should be documented and officially addressed to the Mayor’s Office and ARIS.

The representative of the Town Council, Mr. Shakirov: Don’t think about charges for utility services! The Mayor’s Office shall be responsible for transportation costs of students (1 – 4-year students). We will provide a school bus.

The representative of parent-teacher-student associations: When construction works start?

Mr. Oumetov: Construction works start in spring. Now, drawings are being drawn and design specifications and cost estimates are being produced.

The representative of the Mayor’s Office: Can we manage to complete repair works at one of the schools within a year?

Mr. Oumetov spoke about the kinds of works that should be implemented; that there would be basalt-fiber thermal insulation and that heat plants would be installed. He added he was sure that they could finish repairing one of the schools within a year period. The issue of replacing the roof is still being discussed. There are 28 small towns in the Kyrgyz Republic. If this project is successful, it sets a standard
for the rest, and we can rehabilitate other public institutions, such as schools and kindergartens, in other small towns.

Mr. Chonoyev: To speak of social impact mitigation plan, we have been working on resolving social issues since October. Next week, we have a meeting with the Ministry of Education and we shall discuss further steps with it.

Vice-mayor: She stated there was need to cooperate to resolve the issues; that there was one more week till Dec 1. Then she thanked ARIS, Mr. Oumetov, and all those present at the meeting for coming and sharing their opinions.

The Chairman of the Town Council: He had also thanked everyone for attending public hearings.

So ended public hearings.

The Chairman of the Meeting: [signed] Oumetov B.

13. Public Hearings in Balykchy, Photographic Evidence