

ASSESSMENT OF SAFETY IN SCHOOL AND PRE-SCHOOL EDUCATION INSTITUTIONS IN THE KYRGYZ REPUBLIC

SUMMARY REPORT

THE THREE 'R's' OF THE KYRGYZ REPUBLIC:
RETROFITTING, REPAIR AND RECONSTRUCTION



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USAID
FROM THE AMERICAN PEOPLE



MINISTRY
OF EDUCATION AND SCIENCE
OF THE KYRGYZ REPUBLIC



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This Summary report was developed based on data collected during the nationwide safety assessment of schools and pre-schools in Kyrgyzstan conducted within the “Reducing the Disaster Vulnerability of Children in Kyrgyzstan” project from May 2012 to January 2013. The project is being implemented by the Ministry of Education and Science and the Ministry of Emergency Situations, with technical support from the United Nations Children’s Fund (UNICEF) and funding from the Office of United States Foreign Disaster Assistance, United States Agency for International Development (USAID).

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This Summary Report was compiled by Dr David Gullette.

Executive Summary

Ageing buildings and structures, a lack of financial support and the devastating effects of natural events have made an overwhelming majority of Kyrgyzstan's preschools and schools structurally unsafe. This means that around 1.5 million preschool and school children are at risk every day and demands urgent action.

The high seismic activity on Kyrgyzstan's territory and other regular natural disaster risks pose a significant threat to the weak buildings. From 1 June 2009 to 30 September 2010 there were 2,398 earthquakes in the republic with a magnitude of 6 or more. This means that on average there were nearly five strong earthquakes a day during this period. This significantly lowers the ability of buildings and structures to withstand these and other natural and human-made events over a long period of time and particularly for older structures that require repairs as a normal part of their maintenance. Insufficient funds to support capital repairs indicates that many buildings and structures are now in critical need of retrofitting, repair and reconstruction, as well as non-structural measures to enhance the safety of school and preschool children, teachers and administrators throughout the country.

The draft State Programme of the Kyrgyz Republic 'Repair and Reconstruction of School and Preschool Education Organizations in the Kyrgyz Republic from 2014 to 2020' has outlined a determined plan to provide funding for structural improvements. This needs to be matched with political will and commitment to see the required changes made and that improved structural integrity and disaster risk preparedness take a central part in forming policies and activities not just in the education sector, but throughout all levels of government.

In order to support the Government's initiative, the United Nations Children's Fund (UNICEF) provided technical support through funding from the Office of United States Foreign Disaster Assistance (OFDA), United States Agency for International Development (USAID) to conduct a safety assessment of all preschools and schools in the country. In total, the survey team visited 806 preschools and 2,222 schools, which included assessing 1,198 preschool and 5,583 school buildings and structures throughout the country. The preliminary results indicate that up to 89 per cent of all preschool and 81 per cent school buildings and structures are structurally unsafe and do not meet the legislative requirements for a number of safety measures.

This report serves as a general introduction of the main challenges for each oblast and Bishkek and Osh Cities. It explores safety features in preschools and schools according to four criteria: 1) structural integrity; 2) disaster risk susceptibility; 3) condition of facilities and utilities; and 4) risk awareness and preparedness. A majority of preschools and schools ranked low, but with many demonstrating medium to high function safety.

The overall recommendations are that the Government of the Kyrgyz Republic approve the funding for retrofitting, repairs and reconstruction, implement non-structural mitigation measures and continue with the training in disaster risk reduction and preparedness and provision of first aid. The needs are extensive and will require assistance from not only all levels of government, but also the heads of preschools and schools, and the donor community. Without this, children will continue to learn in buildings and structures that are structurally unsafe, thus highly susceptible to natural disasters, and do not have basic infrastructural requirements. Children deserve a safe learning environment.

An online database – <http://schooldb.caiaa.kg/> – has been created and contains detailed information on all preschools and schools. Access to the site is free and is encouraged that everyone learns more about the preschools and schools in their region, and become engaged in promoting safety in and outside education institutions.

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List of Abbreviations

HFA	Hyogo Framework for Action
KGS	Kyrgyz som
OFDA	Office of United States Foreign Disaster Assistance
SSAM	School Safety Assessment Methodology
UNICEF	United Nations Children's Fund
UNISDR	United Nations Office for Disaster Risk Reduction
USAID	United States Agency for International Development
USD	United States dollar

Notes

This is not a technical report and technical language has been simplified as much as possible. Nonetheless, there are several terms the use of which needs to be clarified. 'Buildings' and 'structures' refer to all forms of constructions that are used in preschools and schools. 'Facilities' are design features of buildings and structures that may have a specific safety purpose.

Administrative and territorial, and demographic information was taken from the National Statistical Committee 2009 census. Information on the number of preschool and school children enrolled was gathered during the assessment in January 2013.

At the time the assessment was conducted and initial analysis of data, the exchange rate was USD 1 = KGS 47.3. This exchange rate has been used throughout the report.

The oblast maps that appear in each report card were taken from the relevant pages on Wikipedia – <http://www.wikipedia.org/>

Maps

Political map of Kyrgyzstan



Assessment Overview

In order to support the initiative of the Government of the Kyrgyz Republic in ensuring the safe and quality learning environment for school and preschool children, UNICEF provided technical support, with funding from OFDA (USAID), to conduct an assessment into the safety of preschool and school buildings and structures. The urgent action that is required to improve the safety of preschools and schools supports the global agenda for safe schools and hospitals under the Hyogo Framework for Action 2005-2015 (HFA), adopted by the Government of the Kyrgyz Republic in 2005 which has set the framework for all civil protection legislation and strategies in the country. The Government's Resolution No. 523 (29 August 2011) for the State Programme 'On Seismic Safety in the Kyrgyz Republic' has furthered the country's efforts to meet the goals set by the HFA by initiating the education institution seismic safety assessment.

This summary report presents the findings of the preliminary assessments conducted on all preschool and school buildings and structures in the Kyrgyz Republic from May 2012 to January 2013. The assessment examined four safety areas:

1. Structural integrity assessment – an inspection of an institution's building (each edifice, bulk and block, if they stand separately from each other), as well as the likelihood of injury or death resulting from the effects of an earthquake.
2. Disaster risk assessment – a visual overview of the disaster risk level of the institution in relation to the existing natural and human-made hazards.
3. Condition of facilities and utilities assessment – an inspection of facilities and utilities to identify their physical condition, operating life and engineering systems.
4. Risk awareness and preparedness assessment – interviews with preschool and school administrators or staff members about their level of awareness of the particular threats to their institution and disaster risk preparedness measures that had been taken in those institutions.

It also provides analysis on the estimated costs. It must be emphasized that these are not the final costs. Once the draft State Programme of the Kyrgyz Republic 'Repair and Reconstruction of School and Preschool Education Organizations in the Kyrgyz Republic from 2014 to 2020' is finalized and approved, more detailed assessments will be conducted and full cost estimates will be provided.

Methodology

The methodology for the assessment has been developed through the collaboration of international organizations, experts and the Government of the Kyrgyz Republic. In 2010, UNICEF and the United Nations Office for Disaster Risk Reduction (UNISDR) developed a comprehensive analytical 'School Safety Assessment Concept' and an accompanying 'School Safety Assessment Methodology'. The following year UNICEF initiated the creation of an individual methodology to provide a rating for school safety. These efforts resulted in the first version of the School Safety Assessment Methodology (SSAM), which was tested in Armenia and Tajikistan. After this, experts on seismic-proof construction and disaster risk reduction in the Kyrgyz Republic adapted the methodology to meet the specific country conditions. In March 2012 the Inter-Ministerial Commission on Civil Protection gave final approval to the methodology and the SSAM was prepared to be conducted in all preschool and school buildings and structures throughout the country.

The project methodology was divided into two parts which were conducted simultaneously. First, construction engineers undertook a preliminary assessment of the structural integrity and the condition of facilities and utilities in buildings and structures. Second, disaster risk reduction specialists reviewed the disaster risk threats to schools and their risk awareness and preparedness of staff. Risks to structures were marked on a scale ranging from high to medium to low.

1. The structural integrity assessment examined 13 structural types together with the supportability of the structures in the estimated seismic conditions. This was the only section that incorporated a fourth safety category where structures could be marked as having no seismic supportability. Construction engineers

used the map of seismic zoning in the Kyrgyz Republic (updated in March 2011) as the basis for establishing seismic conditions and the level of structural integrity safety of the educational institution buildings and facilities.

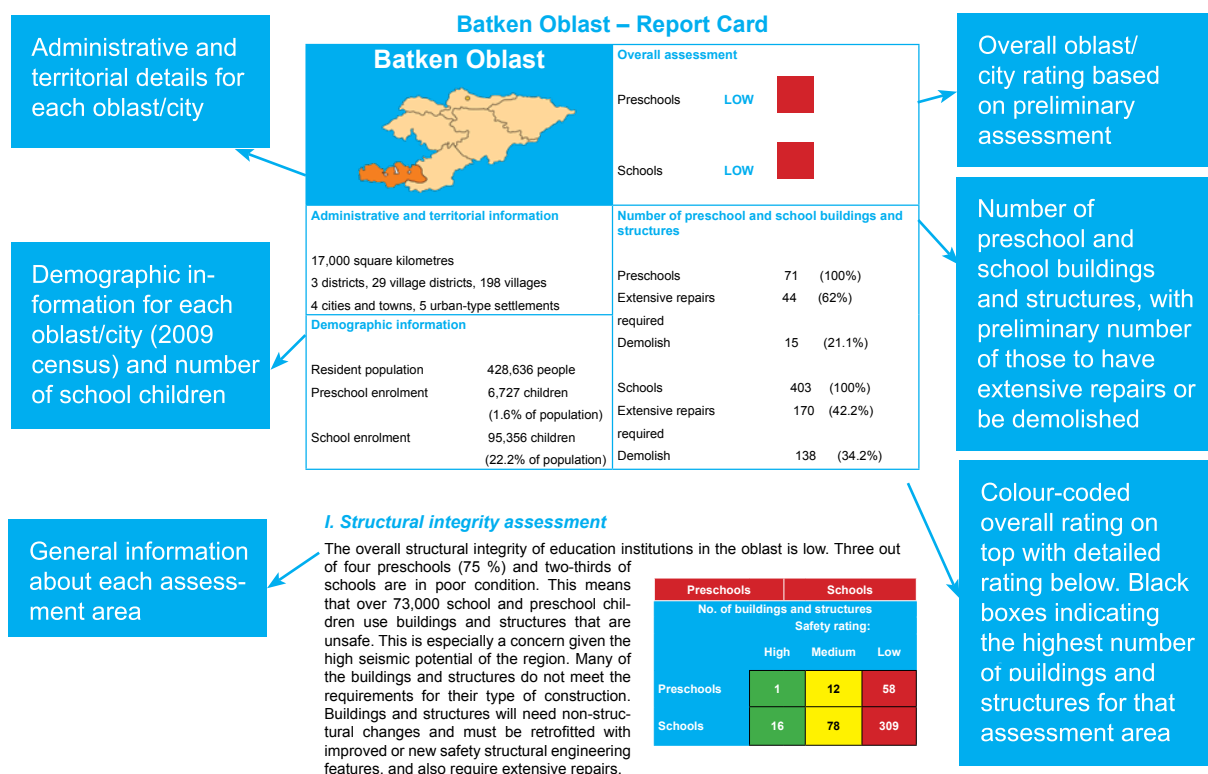
2. The condition of facilities and utilities assessment examined the provision and condition of hot and cold water, water disposal, heating, telephone access, air conditioning, ventilation, roof drains and pavements within the institution's territory, as well as fire safety.
3. The disaster risk assessment examined 16 natural and human-made threats to structures, children and school, preschool staff.
4. In the risk awareness and preparedness assessment the disaster risk reduction specialists interviewed school staff to understand the specific strengths and weaknesses of structures, facilities and utilities, disaster risks in the area and disaster risk preparedness of school, preschool children and staff.

The results of this work were entered into an online database. Detailed reports were also compiled to provide additional information to technical experts together with photographs for visual documentation.

Report cards

In order to provide a quick overview of the assessment findings, data from each oblast and city under republican subordination has been presented as a 'report card'. These report cards – arranged alphabetically by oblast and then city under republican subordination (henceforth, 'city') – provide ratings on the four main areas of assessment. It must be noted that this is not a technical report. Detailed information on all preschool and school buildings and facilities is accessible for free at: <http://schooldb.caiaig.kg/>.

The report cards comprise several parts. The introduction to each card contains general information on the oblast or city. Then, each assessment section has a colour-coded rating system with the number of preschools and schools indicated for each rating in the four sections. In addition, there is a fifth section examining the financial requirements for each oblast and city. Below is a quick guide to help identify the different components of the report card layout and colour-coded information provided for each oblast and city.



Each of the four areas of assessment are rated as high, medium or low, and are colour coded. The colour-coded chart for the assessment of structural integrity, condition of facilities and utilities, and risk awareness and preparedness sections is as follows:

Safety rating		
High	Medium	Low
Preliminary assessment findings and other indicators of this component indicate that at the time of assessment the institution fully complies with the existing safety regulations, rules, requirements, instructions, classifications and standards in terms of minimizing destruction and human and material losses.	Preliminary assessment findings and other indicators of this component indicate that at the time of the assessment: <ul style="list-style-type: none"> the institution fails to fully comply with the safety regulations, rules, requirements, instructions, classifications, standards in terms of minimizing destruction and human and material losses; it is mandatory to take relevant measures that will achieve a higher level of safety. 	Preliminary assessment findings and other indicators of this component indicate that at the time of the assessment: <ul style="list-style-type: none"> the institution fails to comply with safety regulations, rules, requirements, instructions, classifications, standards of safety in terms of minimizing destruction and human and material losses; it is mandatory to take extensive measures to minimize the risk of destruction and human and material losses in case of an emergency.

The ability of buildings and structures to withstand earthquakes was assessed by the type of construction and materials used, and the relative seismic resistance coefficient. More details on this can be found in the 'Methodology and tools for safety assessment of schools and pre-schools in Kyrgyzstan' guidelines (distributed together with this report).

The assessment ratings for disaster risks have been inverted to indicate relative likelihood and threat of a natural disaster affecting the preschool or school buildings and structures.




Disaster risk level		
High	Medium	Low
Preliminary assessment findings and other indicators of this component indicate that at the time of assessment the institution was not at significant threat of a number of disaster risk hazards. The threat of earthquakes is present, but the estimated strength of an earthquake is lower than in other parts of the oblast or city under republican subordination.	Preliminary assessment findings and other indicators of this component indicate that at the time of the assessment the institution was at risk of a number of disaster risk hazards. These may not pose an immediate threat, but were a concern. The threat of earthquakes is present; the estimated strength may be strong.	Preliminary assessment findings and other indicators of this component indicate that at the time of the assessment the institution was at risk of a number of disaster risk hazards. They may pose an immediate threat or are of serious concern. The threat of earthquakes is present and the estimated strength may be strong to severe.

Legal framework

The following is the legal framework of the Kyrgyz Republic that guided this safety assessment on preschool and school buildings and facilities:

- Law "On urban planning and architecture";
- Law "Technical regulation 'On the safety of buildings and structures'";
- Law "Technical regulation 'On the safety of building materials, units and constructions'";
- Code of the Kyrgyz Republic "On administrative responsibility";
- Resolution of the Government of the Kyrgyz Republic No 47 (28 January 2010) "On the introduction of changes and additions to the resolution of the Government of the Kyrgyz Republic No 188 (3 April 1997) 'On the confirmation of the Statue on the adoption of state classificatory certificates for construction sector specialists"; and
- Resolution No 523 (29 August 2011) "On the Government programme 'Seismic safety in the Kyrgyz Republic – 2012-2015'".

Batken Oblast – Report Card

<p>Batken Oblast</p> 	<p>Overall assessment</p> <p>Preschools LOW </p> <p>Schools LOW </p>
<p>Administrative and territorial information</p> <p>17,000 square kilometres 3 districts, 29 village districts, 198 villages 4 cities and towns, 5 urban-type settlements</p>	<p>Number of preschool and school buildings and structures</p> <p>Preschools 71 (100%) Extensive repairs required 44 (62%) Demolish 15 (21.1%)</p>
<p>Demographic information</p> <p>Resident population 428,636 people Preschool enrolment 6,727 children (1.6% of population) School enrolment 95,356 children (22.2% of population)</p>	<p>Schools 403 (100%) Extensive repairs required 170 (42.2%) Demolish 138 (34.2%)</p>

I. Structural integrity assessment

The overall structural integrity of education institutions in the oblast is low. Three out of four preschools (75 %) and two-thirds of schools are in poor condition. This means that over 73,000 school and preschool children use buildings and structures that are unsafe. This is especially a concern given the high seismic potential of the region. Many of the buildings and structures do not meet the requirements for their type of construction. Buildings and structures will need non-structural changes and must be retrofitted with improved or new safety structural engineering features, and also require extensive repairs.

	Preschools	Schools		
	No. of buildings and structures			
	Safety rating:			
	High	Medium	Low	
Preschools	1	12	58	
Schools	16	78	309	

II. Disaster risk assessment

A majority of education institutions are located in areas that are prone to natural disasters. The weak structural integrity of institutions will mean that natural disasters may cause significant damage to preschool and school buildings and facilities. The oblast is located in a highly seismic area, with a potential for earthquakes with an estimated magnitude of 8¹. The oblast also is prone to landslides, mudflows, floods, waterlogging, avalanches

¹ Information based on data from the Seismology Institute of the National Academy of Sciences in the Kyrgyz Republic and the Ministry of Emergency Situations in the Kyrgyz Republic.

and rock falls. There is a risk that a high-altitude lake could burst its banks in the event of natural disaster. In addition, there are two heavy metal tailing sites near Sovetskoe, an urban-type village, in Kadamjai District. Wind can disturb the dust from these sites and pollute the surrounding territory.

	Preschools	Schools		
No. of buildings and structures ³				
Disaster risk level				
	High	Medium	Low	
Preschools	0	6	65	
Schools	1	34	368	

III. Condition of facilities and utilities assessment

The condition of facilities and utilities of institutions in the oblast is low. Nearly 90 per cent of preschools and schools do not meet the standard requirements for facility and utility safety. This means that a majority of those have inadequate and non-functioning utilities, such as piped water, water disposal, heating, proper ventilation, or are non-existent in or around the buildings and structures. This does not only pose a threat for the structural integrity of the building in some cases, but increases the likelihood of illness due to low levels of hygiene and sanitation.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	0	9	62	
Schools	6	35	362	

IV. Risk awareness and preparedness assessment

The risk awareness and preparedness of both preschools and schools does not meet with all standards, but indicates a level of knowledge and preparedness that is above basic. Many institutions performed well in the assessment, with over 40 per cent of preschools and schools receiving high marks for their knowledge of hazards and level of disaster preparedness. Nonetheless, there are still a number of schools (over 15 per cent) that performed poorly in the assessment. Overall, the results indicate that most school and preschool administrators had a good awareness of the history and environment of the institutions, and potential risks. Furthermore, school children are more likely to be aware of what actions they should take in different kinds of emergencies, which is supported by the required institutional support staff for training and awareness raising activities. Nevertheless, further work on DRR awareness raising and education is needed for both staff and children in preschools and schools.




	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	29	35	7	
Schools	168	172	63	

V. Financial requirements

The assessment indicates that significant financial resources are needed to retrofit buildings and facilities to meet the standards required for the disaster risk environment that the preschools and schools are located in, but also for the general safety of school children and school staff. The 2011 republican budget for capital investment in education in Batken Oblast is less than one per cent of the estimated combined total for both the construction and erection work, and the engineering and geological activities costs of preschools and schools². The estimated cost for repairs to preschools is KGS 350,874,000 (USD 7,399,965). The costs are greatest in Leilek District. The estimated cost for repairs to schools is KGS 4,212,077,400 (USD 89,050,261). The costs are greatest in Kadamjai District.

² According to the Ministry of Finance, the 2011 capital investment in education from the republican budget to Batken Oblast was KGS 39,845,000 (USD 842,389). Information from <http://map.okmot.kg/en/> (accessed 5 May 2013). All USD figures are calculated at an exchange rate of USD 1 = KGS 47.30.

Chui Oblast – Report Card

 <h3>Chui Oblast</h3>	Overall assessment	
	Preschools LOW	
	Schools LOW	
Administrative and territorial information	Number of preschool and school buildings and structures	
20,300 square kilometres 8 districts, 104 village districts, 328 villages 4 cities and towns, 5 urban-type settlements	Preschools	184 (100%)
	Extensive repairs required	139 (75.5%)
	Demolish	19 (10.3%)
Demographic information	Schools	1,251 (100%)
Resident population 835,743 people	Extensive repairs required	1,061 (84.8%)
Preschool enrolment 11,969 children (1.4% of population)	Demolish	52 (4.2%)
School enrolment 142,959 children (17.1% of population)		

I. Structural integrity assessment

The overall structural integrity of education institutions in the oblast is low. Less than one in ten (10%) preschools and schools has a medium or high structural safety ranking. This means that nearly 140,000 school children use buildings and structures that are unsafe. The oblast is seismically active, but much of the territory is not estimated to have high magnitude earthquakes. Many of the buildings and structures do not meet the requirements for their type of construction. Buildings and structures will need non-structural changes and must be retrofitted with improved or new safety structural engineering features, and also require extensive repairs.

	Preschools	Schools		
	No. of buildings and structures			
	Safety rating:			
	High	Medium	Low	
Preschools	5	11	168	
Schools	26	43	1,182	

II. Disaster risk assessment

A majority of education institutions are located in areas that are prone to natural disasters. The weak structural integrity of institutions will mean that natural disasters may cause significant damage to preschool and school buildings and facilities. The oblast is located in a seismic area, with a potential for earthquakes in many places with an estimated magnitude of 5 to 7. In some places, however, it is estimated that earthquakes could have magnitude of 9⁴. The oblast is also prone to landslides, mudflows, floods, waterlogging, avalanches and rock

³ Scale inverted to highlight likelihood of disaster risk threat to buildings and structures.

⁴ Information based on data from the Seismology Institute of the National Academy of Sciences in the Kyrgyz Republic and the Ministry of Emergency Situations in the Kyrgyz Republic.

falls. There are 77 lakes that could burst their banks. In particular, there are eight lakes that are a high risk. There are also three locations with tailing sites. Near the urban-type village of Ak-Tyuz, Kemin District, there are four tailing sites. Near the urban-type village of Orlovka, Kemin District, there is another tailing site. In both of these locations, there are the waste products of complex ore mining with some radiation detected. These tailing sites are at risk of landslides and erosion, and could enter the Chu River. This would pollute an important water source used for irrigation and other uses. The third tailing site is near Kara-Balta Town.

	Preschools	Schools		
No. of buildings and structures ⁵				
Disaster risk level				
	High	Medium	Low	
Preschools	0	25	159	
Schools	0	171	1.080	

III. Condition of facilities and utilities assessment

The condition of facilities and utilities of institutions in the oblast is low, but a significant number of schools have medium and high ratings. Three out of four (75%) preschools and schools have inadequate and non-functioning utilities, such as piped water, water disposal, heating, proper ventilation, or are non-existent in or around the buildings and structures. This does not only pose a threat for the structural integrity of the building in some cases, but increases the likelihood of illness due to low levels of hygiene and sanitation.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	6	40	138	
Schools	37	272	942	

IV. Risk awareness and preparedness assessment

The risk awareness and preparedness of preschools is high, but many schools are ranked at a medium level, indicating that some schools do not meet all the standards in this component. Nearly half of preschools have a high rating and a further third have a medium rating. Just less than half of schools have medium rating and nearly another 40 per cent have a high rating. Overall the results indicate that most school and preschool administrators have a good or excellent awareness of the history and environment of the institutions, and the potential risks. Furthermore, school and preschool children are more likely to be aware of what actions they should take in different kinds of emergencies. Nevertheless, further work on DRR awareness raising and education is needed for both staff and children in preschools and schools.




	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	87	66	31	
Schools	474	555	222	

V. Financial requirements

The assessment indicates that significant financial resources are needed to retrofit buildings and facilities to meet the standards required for the disaster risk environment that the preschools and schools are located in, but also for the general safety of school children and school staff. The 2011 republican budget for capital investment in education in Chui Oblast is just over 0.5 per cent of the estimated combined total for both the construction and erection work, and the engineering and geological activities costs of preschools and schools⁵. The estimated cost for repairs to preschools is KGS 862,536,000 (USD 18,235,444). The costs are greatest in Alamedin and Issyk-Ata Districts. The estimated cost for repairs to schools is KGS 8,993,254,000 (USD 190,132,224). The costs are greatest in Sokoluk and Issyk-Ata Districts.

⁵ According to the Ministry of Finance, the 2011 capital investment in education from the republican budget to Chui Oblast was KGS 58,534,200 (USD 1,237,510). Information from <http://map.okmot.kg/en/> (accessed 7 May 2013). All USD figures are calculated at an exchange rate of USD 1 = KGS 47.30.

Issyk-Kul Oblast – Report Card

Issyk-Kul Oblast		Overall assessment	
		Preschools	LOW 
		Schools	LOW 
Administrative and territorial information		Number of preschool and school buildings and structures	
43,100 square kilometres		Preschools	115 (100%)
5 districts, 58 village districts, 175 villages		Extensive repairs required	90 (78.3%)
3 cities and towns, 5 urban-type settlements		Demolish	21 (18.3%)
Demographic information		Schools	702 (100%)
Resident population	438,389 people	Extensive repairs required	511 (72.8%)
Preschool enrolment	7,580 children (1.7% of population)	Demolish	142 (20.2%)
School enrolment	83,954 children (19.2% of population)		

I. Structural integrity assessment

The overall structural integrity of education institutions in the oblast is low. Less than one in ten (10%) preschools and schools has a medium or high structural safety ranking. This means that over 86,000 school children use buildings and structures that are unsafe. The oblast is seismically active and at a high altitude. Many of the buildings and structures do not meet the requirements for their type of construction. Buildings and structures will need non-structural changes and must be retrofitted with improved or new safety structural engineering features, and also require extensive repairs.

	Preschools		Schools	
	No. of buildings and structures			
	Safety rating:			
	High	Medium	Low	
Preschools	1	3	111	
Schools	25	27	650	

II. Disaster risk assessment

A majority of education institutions are located in areas that are prone to natural disasters. The weak structural integrity of institutions will mean that natural disasters may cause significant damage to preschool and school buildings and facilities. The oblast is located in a high-mountain region, from 1,600 to 7,439 metres above sea level. It is also a seismic area, with a potential for earthquakes with an estimated magnitude from 5 up to 9⁷. The oblast also is prone to landslides, mudflows, floods, waterlogging, avalanches and rock falls. There are 108 lakes that could burst their banks. There is one tailing site with radioactive ore near the urban-type village

⁶ Scale inverted to highlight likelihood of disaster risk threat to buildings and structures.

⁷ Information based on data from the Seismology Institute of the National Academy of Sciences in the Kyrgyz Republic and the Ministry of Emergency Situations in the Kyrgyz Republic.

of Kaji-Sai, Ton District. Issyk-Kul Oblast is also where the Kumtor Gold Mine is located. There are various debates about the environmental impact of the mine's operations. Many local residents and politicians point to the negative effects, in particular to a sodium cyanide spill into the Barskoon River in May 1998. Sodium cyanide is used at the mine and waste water containing the cyanide is kept in a tailings pond. After treatment, the water from the tailings pond is released into the Barskoon River, a tributary of the Naryn River. Centerra Gold Inc., the Canadian company that operates the mine, states that the dam that holds the tailing pond is safe and can withstand strong earthquakes⁸.

	Preschools	Schools		
No. of buildings and structures ⁸				
Disaster risk level				
	High	Medium	Low	
Preschools	0	6	109	
Schools	0	23	679	

III. Condition of facilities and utilities assessment

The condition of facilities and utilities of institutions in the oblast is low. Around 80 per cent of all preschools and schools have inadequate and non-functioning utilities, such as piped water, water disposal, heating, proper ventilation, or are non-existent in or around the buildings and structures. This does not only pose a threat for the structural integrity of the building in some cases, but increases the likelihood of illness due to low levels of hygiene and sanitation. Given the high-altitude conditions of the oblast, the lack of proper heating is a concern for students, particularly given the long winter period.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	1	20	94	
Schools	1	148	553	

IV. Risk awareness and preparedness assessment

The risk awareness and preparedness of preschools and schools is ranked high. Three out of four preschools (75%) and over half of schools have high rating. There are also large numbers of medium ratings for both preschools and schools. Overall the results indicate that most school administrators have excellent awareness of the history and environment of the institutions, and the potential risks. Furthermore, school and preschool children are more likely to be aware of what actions they should take in different kinds of emergencies, which is supported by the required institutional support for training and awareness raising activities. Nevertheless, further work on improving DRR awareness and education is needed for both staff and children in preschools and schools.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	87	66	31	
Schools	416	264	22	




V. Financial requirements

The assessment indicates that significant financial resources are needed to retrofit buildings and facilities to meet the standards required for the disaster risk environment that the preschools and schools are located in, but also for the general safety of school children and school staff. The 2011 republican budget for capital investment in education in Issyk-Kul Oblast is just over 0.5 per cent of the estimated combined total for both the construction and erection work, and the engineering and geological activities costs for preschools and schools⁹. The estimated cost for repairs to preschools is KGS 468,840,000 (USD 9,912,054). The costs are greatest in Karakol Town. The estimated cost for repairs to schools is KGS 3,540,557,000 (USD 74,853,220). The costs are greatest in Issyk-Kul and Jeti-Oguz Districts.

⁸ For more on environmental impact at the Kumtor Mine, see P Stegnar and J Stefan (2012) 'Analysis of river and stream sediments from the Kumtor gold mine area, Kyrgyz Republic: Final Report'; and T Nordmann (2012) 'Analyses of samples of surface water, waste water, sediment, landfill and sludge collected in the area of the Kumtor Gold Mine, Kyrgyz Republic, in October 2012'.

⁹ According to the Ministry of Finance, the 2011 capital investment in education from the republican budget to Issyk-Kul Oblast was KGS 20,454,800 (USD 432,448). Information from <http://map.okmot.kg/en/> (accessed 8 May 2013). All USD figures are calculated at an exchange rate of USD 1 = KGS 47.30.

Jalalabad Oblast – Report Card

		Overall assessment	
		Preschools	LOW 
		Schools	LOW 
Administrative and territorial information		Number of preschool and school buildings and structures	
33,700 square kilometres		Preschools	200 (100%)
8 districts, 66 village districts, 420 villages		Extensive repairs required	108 (54%)
7 cities and towns, 7 urban-type settlements		Demolish	45 (22.5%)
Demographic information		Schools	941 (100%)
Resident population	1,009,889 people	Extensive repairs required	426 (45.3%)
Preschool enrolment	17,939 children (1.8% of population)	Demolish	239 (25.4%)
School enrolment	219,924 children (21.8% of population)		

I. Structural integrity assessment

The overall structural integrity of education institutions in the oblast is low. Less than one in ten (10%) preschools and schools has a medium or high structural safety ranking. This means that nearly 170,000 school children use buildings and structures that are unsafe. Many of the buildings and structures do not meet the requirements for their type of construction. Buildings and structures will need non-structural changes and must be retrofitted with improved or new safety structural engineering features, and also require extensive repairs. In fact, it was noted during the preliminary assessment that more schools should be demolished in Aksy, Ala-Buka and Toguz-Toro Districts which is a significant concern. However, in the towns of Maily-Suu and Tashkumur, no school buildings or facilities required extensive repairs or to be demolished, which is a positive sign of the facilities' maintenance.

	Preschools		Schools	
	No. of buildings and structures			
	Safety rating:			
	High	Medium	Low	
Preschools	2	45	153	
Schools	32	197	712	

II. Disaster risk assessment

A majority of education institutions are located in areas that are prone to natural disasters. The weak structural integrity of institutions will mean that natural disasters may cause significant damage to preschool and school buildings and facilities. The oblast is in a seismic area, with a potential for earthquakes with an estimated mag-

¹⁰ Scale inverted to highlight likelihood of disaster risk threat to buildings and structures.

nitude from 5 to 7, but in some places from 7 to 9¹¹. The oblast also is prone to landslides, mudflows, floods, waterlogging, avalanches and rock falls. There are 15 lakes that could burst their banks, but none posing an immediate threat. There are also 23 tailing sites and 13 mountain tailing dumps located near Maily-Suu Town.

	Preschools	Schools		
No. of buildings and structures ¹²				
Disaster risk level				
	High	Medium	Low	
Preschools	0	11	189	
Schools	22	77	842	

III. Condition of facilities and utilities assessment

The condition of facilities and utilities of institutions in the oblast is low. Around 80 per cent of all preschools and schools do not meet the standard requirements for facility or utility safety. This means that a majority of institutions have inadequate and non-functioning utilities, such as piped water, water disposal, heating, proper ventilation, or are non-existent in or around the buildings and structures. This does not only pose a threat for the structural integrity of the building in some cases, but increases the likelihood of illness due to low levels of hygiene and sanitation.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	0	40	160	
Schools	13	138	790	

IV. Risk awareness and preparedness assessment

The risk awareness and preparedness of preschools and schools is at high and medium levels, respectively. More than half of preschools have a medium rating while more than half of schools have a high rating. There are also a large number of medium ratings for both schools. Overall the results indicate that most school administrators have excellent awareness of the history and environment of the institutions, and the potential risks. Yet, there are many preschools and schools where the administrators have a good knowledge of the school and its environment. Most school and preschool children are more likely to be aware of what actions they should take in different kinds of emergencies which is supported by the required institutional support for training and awareness raising activities. However, further work on DRR awareness raising and education is needed for both staff and children in preschools and schools.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	86	107	7	
Schools	491	397	53	




V. Financial requirements

The assessment indicates that significant financial resources are needed to retrofit buildings and facilities to meet the standards required for the disaster risk environment that the preschools and schools are located in, but also for the general safety of school children and school staff. The 2011 republican budget for capital investment in education in Jalalabad Oblast is less than 0.2 per cent per cent of the estimated combined total for both the construction and erection work, and the engineering and geological activities costs for preschools and schools¹². The estimated cost for repairs to preschools is KGS 1,432,859,300 (USD 30,293,009). The costs are greatest in Nookan District. The estimated cost for repairs to schools is KGS 81,341,916,700 (USD 255,633,627). The costs are greatest in Nookan and Suzak Districts.

¹¹ Information based on data from the Seismology Institute of the National Academy of Sciences in the Kyrgyz Republic and the Ministry of Emergency Situations in the Kyrgyz Republic.

¹² According to the Ministry of Finance, the 2011 capital investment in education from the republican budget to Jalalabad Oblast was KGS 141,396,400 (USD 2,989,353). Information from <http://map.okmot.kg/en/> (accessed 13 May 2013). All USD figures are calculated at an exchange rate of USD 1 = KGS 47.30.

Naryn Oblast – Report Card

Naryn Oblast		Overall assessment	
		Preschools	LOW 
		Schools	LOW 
Administrative and territorial information		Number of preschool and school buildings and structures	
45,200 square kilometres 5 districts, 61 village districts, 134 villages (including 2 urban-type settlements) 1 city		Preschools	122 (100%)
		Extensive repairs required	81 (66.4%)
		Demolish	39 (32%)
Demographic information		Schools	518 (100%)
Resident population	257,768 people	Extensive repairs required	290 (56%)
Preschool enrolment	5,904 children (2.3% of population)	Demolish	130 (25.1%)
School enrolment	57,074 children (22.1% of population)		

I. Structural integrity assessment

The overall structural integrity of education institutions in the oblast is low. Less than one in ten preschools and schools (10%) has a medium or high structural safety ranking. This means that over 56,500 school children use buildings and structures that are unsafe. The oblast is seismically active and at a high altitude. Many of the buildings and structures do not meet the requirements for their type of construction. Buildings and structures will need non-structural changes and must be retrofitted with improved or new safety structural engineering features, and also require extensive repairs. In fact, it was noted in the preliminary assessment that more preschools in Ak-Talaa District should be demolished than have extensive repairs conducted. The high number of institutions to be demolished is a concern for the district and oblast.

	Preschools	Schools		
	No. of buildings and structures			
	Safety rating:			
	High	Medium	Low	
Preschools	0	3	119	
Schools	20	79	419	

II. Disaster risk assessment

A majority of education institutions are located in areas that are prone to natural disasters. The weak structural integrity of institutions will mean that natural disasters may cause significant damage to preschool and school buildings and facilities. The oblast is in a seismic area, with a potential for earthquakes with an estimated

¹³ Scale inverted to highlight likelihood of disaster risk threat to buildings and structures.

magnitude from 5 to 7, but in At-Bashy District the estimated magnitude of earthquakes could be from 6 to 8¹⁴. The oblast is also prone to landslides, mudflows, floods, waterlogging, avalanches and rock falls. There are four tailing sites and four mountain dumps with radioactive waste and enriched uranium ore, and 2 ore depots near Ming-Kush, an urban-type settlement, Jumgal District. There was an ore mining complex based in this area from 1958 to 1969, after which it was abandoned. At present there is damage to the protective structures and parts of the surface. Two tailing sites, Tuyuk-Suu and Taldy-Bulak, are of particular concern. Tuyuk-Suu is in a landslide area, which could push tailing materials into tributaries of the Naryn River.

	Preschools	Schools		
No. of buildings and structures ¹⁵				
Disaster risk level				
	High	Medium	Low	
Preschools	0	6	116	
Schools	0	54	464	

III. Condition of facilities and utilities assessment

The condition of facilities and utilities of institutions in the oblast is low. More than 75 per cent of all preschools and 65 per cent of all schools have inadequate and non-functioning utilities, such as piped water, water disposal, heating, proper ventilation, or are non-existent in or around the buildings and structures. This does not only pose a threat for the structural integrity of the building in some cases, but increases the likelihood of illness due to low levels of hygiene and sanitation. Given the high-altitude conditions of the oblast, the lack of proper heating is a concern for students, particularly given the long winter period.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	4	26	92	
Schools	17	161	340	

IV. Risk awareness and preparedness assessment

The risk awareness and preparedness of preschools and schools is at a high level. Nearly half of preschools and over 80 per cent of schools have high rating. There are also large numbers of medium ratings for both preschools and schools. Overall the results indicate that most school and preschool administrators have excellent awareness of the history and environment of the institutions, and the potential risks. Furthermore, school children are more likely to be aware of what actions they should take in different kinds of emergencies, which is supported by the required institutional support for training and awareness raising activities. Nevertheless, further work on DRR awareness raising, education and preparedness is needed for both staff and children in preschools and schools.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	60	45	17	
Schools	429	74	15	




V. Financial requirements

The assessment indicates that significant financial resources are needed to retrofit buildings and facilities to meet the standards required for the disaster risk environment that the preschools and schools are located in, but also for the general safety of school children and school staff. The 2011 republican budget for capital investment in education in Naryn Oblast is just over 2.5 per cent of the estimated combined total for both the construction and erection work, and the engineering and geological activities costs for preschools and schools¹⁵. The estimated cost for repairs to preschools is KGS 292,041,420 (USD 5,957,711). The costs are greatest in Jumgal and Kochkor Districts. The estimated cost for repairs to schools is KGS 2,036,735,660 (USD 43,056,262). The costs are greatest in At-Bashy District.

¹⁴ Information based on data from the Seismology Institute of the National Academy of Sciences in the Kyrgyz Republic and the Ministry of Emergency Situations in the Kyrgyz Republic.

¹⁵ According to the Ministry of Finance, the 2011 capital investment in education from the republican budget to Naryn Oblast was KGS 58,635,600 (USD 1,239,653). Information from <http://map.okmot.kg/en/> (accessed 13 May 2013). All USD figures are calculated at an exchange rate of USD 1 = KGS 47.30.

Osh Oblast – Report card

 <h3>Osh Oblast</h3>	Overall assessment	
	Preschools	LOW 
	Schools	LOW 
Administrative and territorial information 29,200 square kilometres 7 districts, 86 village districts, 474 villages 3 cities and towns, 2 urban-type settlements	Number of preschool and school buildings and structures	
Demographic information Resident population 1,104,248 people Preschool enrolment 12,641 children (1.1% of population) School enrolment 230,888 children (20.9% of population)	Preschools	172 (100%)
	Extensive repairs required	108 (62.8%)
	Demolish	47 (27.3%)
	Schools	930 (100%)
	Extensive repairs required	439 (47.2%)
	Demolish	316 (34%)

I. Structural integrity assessment

The overall structural integrity of education institutions in the oblast is low. Less than one in ten (10%) preschools and schools has a medium or high structural safety ranking. This means that nearly 200,000 school children use buildings and structures that are unsafe. Many of the buildings and structures do not meet the requirements for their type of construction. Buildings and structures will need non-structural changes and must be retrofitted with improved or new safety structural engineering features, and also require extensive repairs. In fact, it was noted in the preliminary assessment that more schools in Alai and Uzgen Districts should be demolished than have extensive repairs conducted. The high number of schools that should be demolished in the oblast is a significant area for concern.

	Preschools	Schools		
	No. of buildings and structures			
	Safety rating:			
	High	Medium	Low	
Preschools	2	12	158	
Schools	30	139	761	

II. Disaster risk assessment

A majority of education institutions are located in areas that are prone to natural disasters. The weak structural integrity of institutions means that natural disasters may cause significant damage to preschool and school buildings and facilities. The oblast is in a seismic area, with a potential for earthquakes with an estimated magnitude from 5 to 8, but in Alai and Chong-Alai Districts it is estimated that the magnitude of earthquakes

¹⁶ Scale inverted to highlight likelihood of disaster risk threat to buildings and structures.

could be from 8 to 9¹⁷. The results of recent earthquakes demonstrate the disaster they can bring and how vulnerable many rural buildings and facilities are at high risk because of the poor quality building materials that are used or do not follow the standards set by the state. On 5 October 2008 most of the village of Nura, Alai District was destroyed after a magnitude 6.6 earthquake struck. The aluminium roofs collapses on mud brick homes, killing 75, including 41 children. The oblast also is prone to landslides, mudflows, floods, waterlogging, avalanches and rock falls. There are 28 lakes with the potential to burst their banks, with one posing an immediate threat. Also, the Teo-Moyun deposit dump in Nookat District containing radionuclides of the uranium series of elements.

	Preschools	Schools		
No. of buildings and structures ¹⁸				
Disaster risk level				
	High	Medium	Low	
Preschools	0	9	163	
Schools	15	100	815	

III. Condition of facilities and utilities assessment

The condition of facilities and utilities of institutions in the oblast is low. On average, 88 per cent of all preschools and schools do not meet the standard requirements for facility and utility safety. This means that a majority of institutions have inadequate and non-functioning utilities, such as piped water, water disposal, heating, proper ventilation, or are non-existent in or around the buildings and structures. This does not only pose a threat for the structural integrity of the building in some cases, but increases the likelihood of illness due to low levels of hygiene and sanitation.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	0	13	139	
Schools	5	129	796	

IV. Risk awareness and preparedness assessment

The risk awareness and preparedness of preschools and schools was at a medium level. A majority of preschools and schools do not meet the have a medium or low rating. Many schools, however, have a high rating and meet all the criteria for this component. Overall the results indicate that most school and preschool administrators have good awareness of the history and environment of the institutions, and the potential risks. Furthermore, school and preschool children are likely to have a fair awareness of what actions they should take in different kinds of emergencies, which is often supported by the required institutional support for training and awareness raising activities. Thus, further school based DRR interventions, DRR education and awareness raising is needed for both staff and children in preschools and schools.

	Preschools	Schools		
No. of buildings and structures ²⁰				
Safety rating:				
	High	Medium	Low	
Preschools	41	107	24	
Schools	367	408	152	

V. Financial requirements




The assessment indicates that significant financial resources are needed to retrofit buildings and facilities to meet the standards required for the disaster risk environment that the preschools and schools are located in, but also for the general safety of school children and school staff. The 2011 republican budget for capital investment in education in Osh Oblast is just over 1.6 per cent of the estimated combined total for both the construction and erection work, and the engineering and geological activities costs for preschools and schools¹⁹. The estimated cost for repairs to preschools is KGS 1,259,532,000 (USD 26,628,557). The costs are greatest in Nookat District. The estimated cost for repairs to schools is KGS 6,903,025,000 (USD 145,941,323). The costs are greatest in Kara-Suu District.

¹⁷ Information based on data from the Seismology Institute of the National Academy of Sciences in the Kyrgyz Republic and the Ministry of Emergency Situations in the Kyrgyz Republic.

¹⁸ The assessment team was unable to meet with staff from three schools in Uzgen District, and therefore, only 927 schools are represented in this rating section.

¹⁹ According to the Ministry of Finance, the 2011 capital investment in education from the republican budget to Osh Oblast was KGS 132,426,200 (USD 2,799,708). Information from <http://map.okmot.kg/en/> (accessed 13 May 2013). All USD figures are calculated at an exchange rate of USD 1 = KGS 47.30.

Talas Oblast – Report Card

 <p>Talas Oblast</p>	Overall assessment	
	Preschools LOW	
	Schools LOW	
Administrative and territorial information	Number of preschool and school buildings and structures	
11,400 square kilometres 4 districts, 36 village districts, 90 villages 1 city, 1 urban-type settlement	Preschools 40 (100%) Extensive repairs required 31 (77.5%) Demolish 4 (10%)	
Demographic information	Schools 215 (100%) Extensive repairs required 129 (60%) Demolish 62 (28.8%)	
Resident population 226,779 people Preschool enrolment 5,008 children (2.2% of population) School enrolment 47,593 children (21% of population)		

I. Structural integrity assessment

The overall structural integrity of education institutions in the oblast is low. Less than one in ten (10%) preschools and schools has a medium or high structural safety ranking. This means that over 46,000 school children use buildings and structures that are unsafe. Many of the buildings and structures do not meet the requirements for their type of construction. Buildings and structures will need non-structural changes and must be retrofitted with improved or new safety structural engineering features, and also require extensive repairs.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	1	4	35	
Schools	4	20	91	

II. Disaster risk assessment

A majority of education institutions are located in areas that are prone to natural disasters. The weak structural integrity of institutions will mean that natural disasters may cause significant damage to preschool and school buildings and facilities. The oblast is in a seismic area, with a potential for earthquakes with an estimated mag-

²⁰ Scale inverted to highlight likelihood of disaster risk threat to buildings and structures.

nitude from 5 to 7, but in some places from 7 to 9²¹. The oblast also is prone to landslides, mudflows, floods, waterlogging, avalanches and rock falls. There are 24 lakes that could burst their banks, with two of particular concern.

	Preschools	Schools		
No. of buildings and structures ²⁰				
Disaster risk level				
	High	Medium	Low	
Preschools	0	0	40	
Schools	3	2	210	

III. Condition of facilities and utilities assessment

The condition of facilities and utilities of institutions in the oblast is low. Around 80 per cent of all preschools and schools do not meet the standard requirements for facility and utility safety. This means that a majority of institutions have inadequate and non-functioning utilities, such as piped water, water disposal, heating, proper ventilation, or are non-existent in or around the buildings and structures. This does not only pose a threat for the structural integrity of the building in some cases, but increases the likelihood of illness due to low levels of hygiene and sanitation.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	1	10	29	
Schools	1	37	117	

IV. Risk awareness and preparedness assessment

The risk awareness and preparedness of preschools and schools is at a high level. All preschools and over 65 per cent of schools have high rating. There are also large numbers of that do not meet all the standard requirements, but are not failing. Overall the results indicate that most preschool and school administrators have excellent awareness of the history and environment of the institutions, and the potential risks. Furthermore, school and preschool children are more likely to be aware of what actions they should take in different kinds of emergencies, which is supported by the required institutional support for training and awareness raising activities. Nevertheless, further work on DRR education and awareness raising is needed for both staff and children in preschools and schools.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	40	0	0	
Schools	140	73	2	




V. Financial requirements

The assessment indicates that significant financial resources are needed to retrofit buildings and facilities to meet the standards required for the disaster risk environment that the preschools and schools are located in, but also for the general safety of school children and school staff. The 2011 republican budget for capital investment in education in Talas Oblast is just over 2.1 per cent of the estimated combined total for both the construction and erection work, and the engineering and geological activities costs for preschools and schools²². The estimated cost for repairs to preschools is KGS 196,007,690 (USD 4,143,926). The costs are greatest in Kara-Buura District. The estimated cost for repairs to schools is KGS 1,890,732,930 (USD 39,973,212). The costs are greatest in Kara-Buura and Talas Districts.

²¹ Information based on data from the Seismology Institute of the National Academy of Sciences in the Kyrgyz Republic and the Ministry of Emergency Situations in the Kyrgyz Republic.

²² According to the Ministry of Finance, the 2011 capital investment in education from the republican budget to Talas Oblast was KGS 45,105,200 (USD 953,598). Information from <http://map.okmot.kg/en/> (accessed 13 May 2013). All USD figures are calculated at an exchange rate of USD 1 = KGS 47.30.

Bishkek City – Report Card

 <p>Bishkek City</p>	Overall assessment	
	Preschools LOW 	Schools LOW 
Administrative and territorial information	Number of preschool and school buildings and structures	
169.6 square kilometres 4 districts, 1 urban-type settlement, 1 village	Preschools 260 (100%) Extensive repairs required 243 (93.5%) Demolish 2 (0.8%)	Schools 550 (100%) Extensive repairs required 536 (97.5%) Demolish 3 (0.5%)
Demographic information		
Resident population 835,743 people Preschool enrolment 27,207 children (3.3% of population) School enrolment 112,901 children (13.5% of population)		

I. Structural integrity assessment

The overall structural integrity of education institutions in the city is low. Less than one in ten preschools and schools (10%) has a medium or high structural safety ranking. This means that over 135,000 school children use buildings and structures that are unsafe. Many of the buildings and structures do not meet the requirements for their type of construction. Buildings and structures will need non-structural changes and must be retrofitted with improved or new safety structural engineering features, and also require extensive repairs. These extensive safety improvements are needed, despite the fact that Bishkek has more preschools and schools built after independence than any oblast or city in the country.

	Preschools	Schools		
	No. of buildings and structures			
	Safety rating:			
	High	Medium	Low	
Preschools	7	9	244	
Schools	8	8	534	

II. Disaster risk assessment

A majority of education institutions are located in areas that are prone to natural disasters. The weak structural integrity of institutions will mean that natural disasters may cause significant damage to preschool and school buildings and facilities. The city is located in a seismic area, with a potential for earthquakes in many places with an estimated magnitude of 8²⁴. Parts of the city are prone to landslides, mudflows, floods, waterlog-

²³ Scale inverted to highlight likelihood of disaster risk threat to buildings and structures.

²⁴ Information based on data from the Seismology Institute of the National Academy of Sciences in the Kyrgyz Republic and the Ministry of Emergency Situations in the Kyrgyz Republic.

ging and soil subsidence, especially in several new settlements (i.e. novostroiki). Nonetheless, preschools and schools are at greatest risk of earthquakes.

	Preschools	Schools		
No. of buildings and structures ²⁵				
Disaster risk level				
	High	Medium	Low	
Preschools	0	1	259	
Schools	0	22	528	

III. Condition of facilities and utilities assessment

The condition of facilities and utilities of institutions in the oblast is predominantly at a medium level, but does not fully comply with standards. There are also a significant number of schools have a low rating. This indicates that four out of five (80%) preschools and just over half of schools have functioning utilities, such as piped water, water disposal, heating, proper ventilation and other utilities in or around the buildings and structures. The assessments, however, found that these were not all in the best working order and marked areas for improvement. The greater provision of utilities for schools is related to the existing urban infrastructure. This indicates that although it is the economic and political capital of the country, the infrastructure of the city needs repairs and modernization that exceed the regular maintenance work. The overall condition of the facilities and utilities suggests that the hygiene and sanitation should be better in the city.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	27	209	24	
Schools	50	327	173	

IV. Risk awareness and preparedness assessment

The risk awareness and preparedness of preschools is at a high level, indicating that nearly all schools meet the standards required. Overall the results indicate that almost all preschool and school administrators have a good or excellent awareness of the history and environment of the institutions, and the potential risks. No institutions received a low rating. Furthermore, school children are more likely to be aware of what actions they should take in different kinds of emergencies, which is supported by the required institutional support staff for training and awareness raising activities. However, further school based DRR interventions, work on DRR education and awareness raising is needed for both staff and children in preschools and schools.




	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	257	3	0	
Schools	540	10	0	

V. Financial requirements

The assessment indicates that significant financial resources are needed to retrofit buildings and facilities to meet the standards required for the disaster risk environment that the preschools and schools are located in, but also for the general safety of school children and school staff. In 2011 there were no funds provided from republican budget for capital investment in education in Bishkek City which means that there is an even greater funding gap for preschools and schools in both the construction and erection work, and the engineering and geological activities that need to be conducted²⁵. The estimated cost for repairs to preschools is KGS 2,881,820,010 (USD 60,926,427). The costs are greatest in Lenin and Sverdlov Districts. The estimated cost for repairs to schools is KGS 5,480,272,360 (USD 115,861,995). The costs are greatest again in Lenin and Sverdlov Districts.

²⁵ According to the Ministry of Finance, the 2011 capital investment in education from the republican budget to Bishkek City was KGS 0 (USD 0). Information from <http://map.okmot.kg/en/> (accessed 13 May 2013). All USD figures are calculated at an exchange rate of USD 1 = KGS 47.30.

Osh City – Report Card

 <p>Osh City</p>	Overall assessment	
	Preschools LOW	
	Schools LOW	
Administrative and territorial information	Number of preschool and school buildings and structures	
182.5 square kilometres	Preschools	34 (100%)
Demographic information	Extensive repairs required	21 (61.8%)
Resident population 258,111 people	Demolish	0 (0%)
Preschool enrolment 8,674 children (3.4% of population)	Schools	72 (100%)
School enrolment 44,672 children (17.3% of population)	Extensive repairs required	30 (41.7%)
	Demolish	4 (5.6%)

I. Structural integrity assessment

The overall structural integrity of education institutions in the city is low. Six out of ten (60%) preschools and over four out of ten (40%) schools have a low structural safety ranking. This means that over 25,000 school children use buildings and structures that are unsafe. Many of the buildings and structures do not meet the requirements for their type of construction. Buildings and structures will need non-structural changes and must be retrofitted with improved or new safety structural engineering features, and also require extensive repairs.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	2	12	20	
Schools	0	40	32	

II. Disaster risk assessment

A majority of education institutions are located in an area that is prone to natural disasters. The weak structural integrity of institutions means that natural disasters may cause significant damage to preschool and school buildings and facilities. The city is in a seismic area, with a potential for earthquakes with an estimated magnitude up to 9²⁷. The city is also prone to landslides, mudflows, floods, waterlogging, avalanches and rock falls.

	Preschools	Schools		
No. of buildings and structures ²⁸				
Disaster risk level				
	High	Medium	Low	
Preschools	0	3	31	
Schools	1	6	65	

²⁶ Scale inverted to highlight likelihood of disaster risk threat to buildings and structures.

²⁷ Information based on data from the Seismology Institute of the National Academy of Sciences in the Kyrgyz Republic and the Ministry of Emergency Situations in the Kyrgyz Republic.

III. Condition of facilities and utilities assessment

The condition of facilities and utilities of institutions in the oblast is low. This indicates that over half of all preschools and schools have inadequate and non-functioning utilities, such as piped water, water disposal, heating, proper ventilation and other utilities in or around the buildings and structures. This does not only pose a threat for the structural integrity of the building in some cases, but increases the likelihood of illness due to low levels of hygiene and sanitation.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	0	16	18	
Schools	0	31	41	

IV. Risk awareness and preparedness assessment

The risk awareness and preparedness of preschools and schools is at a high level. Nearly all preschools and schools have a high rating. There are also large numbers of satisfactory ratings for both preschools and schools. Only one school received a low rating. Overall the results indicate that most school, preschool administrators have excellent awareness of the history and environment of the institutions, and the potential risks. Furthermore, school, preschool children are more likely to be aware of what actions they should take in different kinds of emergencies, which is supported by the required institutional support for training and awareness raising activities. Nevertheless, further school based DRR interventions, work on DRR education and awareness raising is needed for both staff and children in preschools and schools.

	Preschools	Schools		
No. of buildings and structures				
Safety rating:				
	High	Medium	Low	
Preschools	31	3	0	
Schools	65	6	1	

V. Financial requirements

The assessment indicates that significant financial resources are needed to retrofit buildings and structures to meet the standards required for the disaster risk environment that the preschools and schools are located in, but also for the general safety of school children and school staff. In 2011 there were no funds provided from republican budget for capital investment in education in Osh City which means there is an even greater funding gap for preschools and schools in both the construction and erection work, and the engineering and geological activities that need to be conducted²⁸. The estimated cost for repairs to preschools is KGS 541,603,990 (USD 11,450,401). The estimated cost for repairs to schools is KGS 1,711,726,060 (USD 36,188,712).

²⁸ According to the Ministry of Finance, the 2011 capital investment in education from the republican budget to Osh City was KGS 0 (USD 0). Information from <http://map.okmot.kg/en/> (accessed 13 May 2013). All USD figures are calculated at an exchange rate of USD 1 = KGS 47.30.

Overall recommendations

To the Government of the Kyrgyz Republic:

Structural integrity

- A. Finalize and approve the State Programme and Action Plan of the Kyrgyz Republic 'Repair and Reconstruction of School and Preschool Education Organizations in the Kyrgyz Republic from 2014 to 2020' (henceforth, 'State Programme').
- B. Establish interdepartmental commission at national and local levels to agree on the list of preschools and schools to be retrofitted, repaired and reconstructed in order of priority throughout the period of the State Programme.
- C. Re-allocate money at the national and local levels to ensure that urgent safety needs are addressed in preschools and schools throughout the country.
- D. Engage international investors, donors for financial support to improve preschool and school safety, particularly in the area of seismic safety.
- E. Include into State Programme non-structural mitigation measures that can be made to all institutions, particularly those that require extensive repairs to limit additional dangers to preschool and school staff and children.
- F. Equip every preschool and school with essential emergency equipment, such as fire extinguishers and emergency ladders for buildings and facilities with more than one storey.
- G. Work with heads of local self-government bodies and preschools and schools to be able to conduct annual assessments of basic criteria to be able to highlight structural integrity and the condition of facilities and utilities safety issues.
- H. Introduce changes to legislative and normative acts of the Kyrgyz Republic for provision of effective control and implementation of activities on disaster preparedness and disaster risks reduction in schools and preschools.
- I. Develop simple assessment records to be able to monitor the structural integrity of buildings and structures for non-technical evaluators.

Disaster risk

- J. Relocate preschools and schools where current buildings and facilities are located in high-risk prone areas.
- K. Develop national campaign raising attention to the work that is to be conducted and the need for improved disaster risk preparedness in general.
- L. Provide updated assessments by the Ministry of Emergency Situations on disaster risk threats and potential projects for mitigating the effects of these risks.
- M. Strengthen the Kyrgyz Hydrological and Meteorological Service's capacity to be able to provide advanced forecasting to alert residents of conditions that could create natural disasters and hazards.
- N. Support the Kyrgyz Hydrological and Meteorological Service to develop a risk monitoring and early warning system in the Kyrgyz Republic.

Condition of facilities and utilities

- O. Review standards and pass legislation where required for the safe design of utilities into preschool and

school buildings and facilities.

- P. Review the allocation of funds to preschool and school maintenance and upkeep at the national and local levels.

Risk awareness and preparedness

- Q. Strengthen legislation and programming overseeing training and awareness-raising campaigns of disaster risk reduction and responses to emergencies.
- R. Require the certification in first aid for all school, preschool staff.
- S. Develop simple assessment records to be able to monitor the disaster awareness and preparedness levels on a more regular basis.

To the Heads of Self-Government Bodies (Aiyl Okmotus):

Structural integrity

- A. Collaborate with government bodies, community leaders and private businesses to facilitate work to improve the structural integrity of preschools and schools.
- B. Prioritize the allocation of funds to implement the State Programme for local budgets.
- C. Submit requests to the 'State Grants for Development' programme with the specific aim to further work on disaster risk reduction and safety in preschools and schools.

Disaster risk

- D. Develop Civil Protection plans with the Ministry of Emergency Situations to minimize disaster risk threats, especially in locations where there are other significant hazards (e.g. tailing sites).

Condition of facilities and utilities

- E. Collaborate with government bodies to facilitate work to improve the condition of facilities and utilities in preschools and schools.
- F. Request that utility suppliers check equipment and provide estimates on updating the facilities and utilities to better protect preschools and schools during an emergency event.
- G. In any areas where infrastructure for preschools or schools is not listed in the inventory of physical assets or registered to the institution, this must be changed and documentation must be obtained to this effect.

Risk awareness and preparedness

- H. Work with the Ministry of Emergency Situations to conduct training and simulation drills at the community level to raise the awareness of disaster risk hazards and preparedness.

To the Heads of Preschools and Schools:

Structural integrity

- A. Complete preschool and school safety records in cases where data was not available or unknown, and, if necessary, request assistance from technical experts.
- B. Request training on how to identify structural integrity issues in buildings and facilities.

Disaster risk

- C. Engage preschool and school children and youth in the development of projects and participation in their implementation so that they become disaster risk reduction awareness and preparedness leaders in their communities.

Condition of facilities and utilities

- D. Ensure that regular checks are performed on utilities to assess their working status and notify utility companies of any problems or disruption to service.

Risk awareness and preparedness

- E. Continue to conduct training exercises in disaster risk reduction and preparedness.
- F. Work with teaching staff on disaster risk reduction and preparedness with the support of the Ministry of Emergency Situations.
- G. Continue the Disaster Risk Reduction / Principles of Everyday Safety lessons, integrating courses into curricula for grades 6 to 11 and hold regular extracurricular activities to practise skills.
- H. Ensure that all preschool and school staff is certified in first aid with support from the Ministry of Health.
- I. Promote safe behaviour during emergencies, first aid training and simulation drills among school children with support from the relative government bodies.
- J. Work with parents to ensure that disaster risk reduction techniques and training is being conducted at home.

To the Donor Community:

Structural integrity

- A. Collaborate with the Government of the Kyrgyz Republic through the sector-side approach (SWAp) or any approach/mechanism at the national and local levels to ensure that technical and financial support is provided in addressing the structural integrity issues in preschools and schools.

Disaster risk

- B. Collaborate with the Ministry of Emergency Situation and local administrations to provide technical support and expertise in developing plans and implementing projects to minimize disaster risks and mitigate the effects of these threats.

Condition of facilities and utilities

- C. Provide technical expertise where possible to promote safer use of utilities in preschool and school environments.

Risk awareness and preparedness

- D. Provide assistance to enhance risk awareness and preparedness training and activities in preschools and schools.

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Other sources

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- Map of seismic zones of the territory of the Kyrgyz Republic 2011 in scale of 1:1,000,000. Confirmed by order of the State Agency for Construction and Regional Development under the Government of the Kyrgyz Republic No 20 (23 March 2012).

Detailed information on all preschool and school buildings and facilities is freely accessible at:

<http://schooldb.caiag.kg/>.

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