

E1351 v7

# ENVIRONMENTAL IMPACT ASSESSMENT



**Ordered by: MINISTRY OF EDUCATION & SCIENCE**  
**Education Excellence and Equity Programm (EEP-P)**

***Project:*** *Construction of new 9 Year Primary School Bathore 6, Kamza Municipality*

**Location:** "Erzeni" Street, Bathore 6, Kamza Municipality - Tirane

**Tirana, June 2011**

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## INTRODUCTION

The National Strategy for Development and Integration 2007-2013 defines the social policies in its priorities and provides for and is committed to *an education and training system that responds to challenges and ensures inclusion of all children.*

Albania has the lowest indicators of school attendance compared with regional countries. Total public expenditures for education fell during the transition period (3.1% of GDP in 2004), while the EU member states average is 4.9%. To reflect the priority attached by the Government to education, overall public spending on education increased to 3.55% of GDP in 2009. In general, schools have inherited shortages in teaching materials, laboratories and maintenance. The government managed to establish computer science laboratories in all schools significantly increasing the number of computers available to students. Schools in cities and urban peripheral areas work beyond their capacity, whereas in some rural areas, student-teacher ratio is very low, and poor transportation infrastructure makes concentration of schools difficult. Increase of enrollment percentage in lower secondary education, especially in rural areas and particularly by girls, is a priority in the European Partnership framework. Vocational education expansion and qualitative increase does not respond to market demands, it has still weak links with social partners.

Democratic development and demographic movements, uncontrolled urban development, uncontrolled population movement that accompanied developments in the two recent decades had a sensitive impact on socio-economic life of the population. Many unknown areas before are populated nowadays because of migration of residents from remote areas of the country to areas of a better development prospect. Naturally, an important part of these populated areas development should be offering adequate schooling infrastructure.

The Education Excellence and Equity Project (EEE-P) supports implementation of National Education Strategy (NES) first phase. The EEE-P objective is to improve the quality of learning conditions for all pupils, and to increase attendance of general secondary schools, especially by the poor.

The project has four priorities:

- 1) strengthening of leadership, management and governance of educational system;
- 2) improvement of teaching process conditions;
- 3) improvement and rationalization of educational infrastructure; and
- 4) setting the stage for the higher education reform.

The third priority is improvement and rationalization of educational infrastructure, which, besides rehabilitation of existing schools, entails enlargement or construction of more than ten schools.

## **PROJECT DESCRIPTION**

### **PROJECT OBJECTIVES**

The proposed EEE-P is supporting the Government in implementing the first phase of National Education Strategy (NES) in Albania. The EEE-P objective is to improve the quality of learning conditions for all pupils and to increase enrollment in general secondary education, especially by the poor. The intermediate goals are improvement of leadership, management and governance of educational system, use of new teaching methods by teachers and wider variety of teaching aids in schools, improvement of school infrastructure quality and its use efficiency and undertaking of initial steps of higher education reform.

### **PROJECT PRIORITIES**

The project is implemented through four priority areas.

**Priority 1:** Strengthening of educational system leadership, management and governance (US\$ 10 million).

This priority area aims at strengthening leadership and management capacities, and improving educational system governance and accountability. This includes activities associated with decentralization, leadership strengthening, professional development of school principals, decision making and resource management in the school level, increasing the communities' participation, introduction of performance-based management system, and full utilization of Education Management Information System (EMIS) for decision making. Decentralized service provision will be piloted in 2-3 regions before deciding on a roll out plan. This is expected to form an institutional foundation to address other priority areas.

**Priority 2:** Improvement of teaching and learning conditions (US\$ 26 million).

This priority area focuses on a comprehensive improvement of teaching and learning conditions quality. Special attention would be paid to support of teachers' professional development so as to qualify them to use more effective teaching methods in their classes. It would also address the issues of curricula reform, including the development of a national framework for curricula, rationalization of subjects, integration and development of textbooks. In order to implement curricula reform, policies and practices for teachers' are being reviewed. Development of assessment and education assessment will continue by strengthening the capacities of National Assessment and Exams Center, development of a national plan for assessment in education, and improvement of transparency and integrity of State matura system. This priority area enables the teachers and pupils to use a wider range of appropriate educational tools and methods in the teaching and learning process.

**Priority 3:** Improvement and rationalization of educational infrastructure, (US\$ 32 million).

This priority area addresses most efficient investments and (re)allocation in physical infrastructure and human resources especially in the secondary education level. It supports MoES in making decisions on investments based on school maps, which takes into consideration the demographic

development in Albania. Science laboratories and ICT facilities are being provided to general secondary schools in line with the new curriculum and teachers training under priority area 2.

**Priority 4:** Setting the stage for higher education reform (US\$ 7 million).

This priority area focuses on support of the initial stages of higher education reform. It supports MoES and universities to carry out a system analysis in order to identify and establish the order of reform activities, which include the strengthening of university governance, financial autonomy increase and accountability of universities, strengthening of quality assurance mechanism, and promotion of university partnership agreements. It intends to increase opportunities for pupils by mobilizing private financing, provision and more efficient use of public resources.

**MAJOR PHYSICAL INVESTMENTS**

The main physical investment component of the proposed project falls under *Priority 3 area – improvement and rationalization of education infrastructure, especially in secondary education*. Location of these investments are being decided on the basis of school mapping database, taking into consideration the demographic development in Albania and availability of state-owned land. Since EEE-P uses a sector-wide approach, the actual expansion of physical investments and their location is clarified by Annual Reform Program.

Table 1 contains the list of subprojects. Activities consist of minor civil works for rehabilitation and renovation of existing school facilities, construction of building enlargements within the existing schoolyards and construction of new schools on newly allocated sites. Science laboratories and ICT facilities are being provided to general secondary schools in line with the new curriculum and teachers training.

Table 1 Preliminary list of schools for enlargement and construction

| LIST OF SCHOOLS FOR ENLARGEMENT AND CONSTRUCTION |  |                     |                                       |                              |   |
|--|--|---------------------|---------------------------------------|------------------------------|---|
| As of May, 2011                                  |  |                     |                                       |                              |   |
|  | School name  | Location            | Status of environmental due diligence | Status                       | Comment   |
| School enlargement on existing schoolyard        | 1. ZallMner Primary School, Kamza, Tirana                    | Kamez-Zall Mner     | EMP checklist prepared and disclosed  | Construction works finalized | Municipality need to follow up with construction firm to address minor construction problems. |
|  | 2. Ibrahim Rugova Primary School, Kamza, Tirana              | Kamez Center        | EMP checklist prepared and disclosed  | Construction works finalized | Municipality need to follow up with construction firm to address minor construction problems. |
|  | 3. Ballsh, Mallakaster Secondary School, Ballsh, Mallakaster | Ballsh, Mallakaster | EMP checklist prepared and disclosed  | Construction ongoing         | MoEs needs to inform Bank of status of site (i.e. whether resettlement will be needed)        |
|  | 4. Beslidhja Primary School, Lezhe                           | Lezhe               | EMP checklist prepared and disclosed  | Construction works stopped   | Construction works stopped due to the raised question on land ownership                       |

|  |  |                   |                                      |                                     |   |
|--|--|-------------------|--------------------------------------|-------------------------------------|---|
|  | 5. Lezhe Secondary School , Lezhe                | Lezhe             | EMP checklist prepared and disclosed | Construction ongoing                | Construction ahead of schedule  |
|  | 6. Krume 9-year Primary School, Krume            | Krume, Has        | EMP checklist prepared and disclosed | Construction ongoing                |   |
|  | 7. Durres B.Curri Primary School, Durres City    | Durres city       | EMP checklist prepared and disclosed | Construction works have not started | The design and bill of quantities requires review as demolition of old school building was not taken into account                               |
|  | 8. Kilica Secondary School, Fier City            | Fier city         | EMP checklist prepared and disclosed | Construction ongoing                |   |
|  | 9. Durres Keneta                                 | Durres            | EMP checklist not prepared           | Construction works have not started | This is the new item on the list. As the municipality did not find appropriate land for new school, they decided to extend the existing school. |
|  | 10. Bathore 9-year school, Kamza-Bathore, Tirana | Kamza-Bathore (6) | EMP checklist not prepared           | Construction works have not started | This is the new item on the list. As the municipality did not find appropriate land for new school, they decided to extend the existing school. |
|  | 11. School No. 01 – Primary                      | Kruje             | EMP checklist not prepared           | Construction works have not started | This is the new item on the original list. Proposed extension / rehabilitation  |
|  | 12. Meleq Gosnishti - Primary                    | Përmet            | EMP checklist not prepared           | Construction works have not started | This is the new item on the original list. Proposed extension / rehabilitation  |
|  | 13. Ura Vajgurore - Primary                      | Berat             | EMP checklist not prepared           | Construction works have not started | This is the new item on the original list. Proposed extension / rehabilitation  |
|  | 14. Lukove – Primary                             | Saranda           | EMP checklist not prepared           | Construction works have not started | This is the new item on the original list. Proposed extension / rehabilitation  |
|  | 15. Frakull e Vogel – Primary                    | Fier              | EMP checklist not prepared           | Construction works have not started | This is the new item on the original list. Proposed extension / rehabilitation  |
|  | 16. Kol Koci – Primary                           | Pogradec/Korca    | EMP checklist not prepared           | Construction works have not started | This is the new item on the original list. Proposed extension / rehabilitation  |
|  | 17. Lazarat – Secondary                          | Gjirokastrë       | EMP checklist not prepared           | Construction works have not started | This is the new item on the original list. Proposed extension / rehabilitation  |
|  | 18. Sotir Gurra – Primary                        | Korce             | EMP checklist not prepared           | Construction works have not started | This is the new item on the original list. Proposed extension / rehabilitation  |
|  | 19. B. Curri – Primary                           | Kukes             | EMP checklist not prepared           | Construction works have not started | This is the new item on the original list. Proposed extension / rehabilitation  |
|  | 20. Rreth (2 <sup>nd</sup> ) Basic Ed.           | Rreth –Xhafzoty   | EMP checklist not prepared           | Construction works have not started | This is the new item on the original list. Proposed extension / rehabilitation  |

|                   |  |          |                            |                          |  |
|-------------------|--|----------|----------------------------|--------------------------|--|
| New constructions | 21. Paskuqan 9-year Primary School, Paskuqan, Tirana | Paskuqan | EIA prepared and disclosed | Design under preparation |  |
|-------------------|--|----------|----------------------------|--------------------------|--|

|  |  |                       |                                       |   |   |
|--|--|-----------------------|---------------------------------------|---|---|
|  | 22. Saranda 9-year Primary School, Saranda                               | Saranda               | EIA not prepared                      | Confirmation of expropriation not yet received  | EIA will be tendered at the same time as design. Tendering process will start after ownership papers are received. <b>Problems with land title.</b> |
|  | 23. Shkoder Secondary School , Shkoder                                   | Shkoder               | EIA not prepared                      | Ownership solved, works have not started        | EIAs for remaining schools will be procured in one package, therefore awaiting for ownership of other schools to be solved                          |
|  | 24. Vlore Secondary School, Vlore City                                   | Vlore city            | EIA not prepared                      | Confirmation of expropriation not yet received  | EIA would be tendered at the same time as design. Tendering process will start after ownership papers are received.                                 |
|  | 25. Fushe Kruje Secondary School, Fushe Kruje, Kruje                     | Fushe-Kruje, Kruje    | EIA not prepared                      | Ownership issues solved, works have not started | EIAs for remaining schools will be procured in one package, therefore awaiting for ownership of other schools to be solved                          |
|  | 26. Peshkopi, Diber Secondary School, Peshkopi, Diber                    | Peshkopi, Diber       | EIA under preparation                 | Ownership issues solved, works have not started | EIA expected to be finalized by the end of November   |
|  | 27. Tropoje 9-year B.Curri Primary School, Bajram Curri, Tropoje         | Bajram Curri, Tropoje | EIA under preparation                 | Ownership issues solved, works have not started | EIA expected to be finalized by the end of November   |
|  | 28. Bulcesh 9-year Primary School (Bathore 5), Kamza-Bathore (5), Tirana | Kamza- Bathore        | EIA under preparation                 | Ownership issues solved, works have not started | EIA expected to be finalized by the end of November   |
|  | 29. Shkoder 9-year Primary School  | Mar-Lulaj             | EIA prepared (currently under review) | Ownership issues solved, works have not started | Pending resubmission of EIA to Bank   |



## DESCRIPTION OF PRIMARY 9 YEAR SCHOOL “bathore 6”

### SCHOOL AND SITE

The design of the new school will be based on the General Plan prepared by the Kamez Municipality. The classrooms will be oriented through south-east, in order for the classrooms to be illuminated naturally and be warm. This school area will be composed of several elements: school itself, the gym and two playfields (See the general layout presented on figure 1).

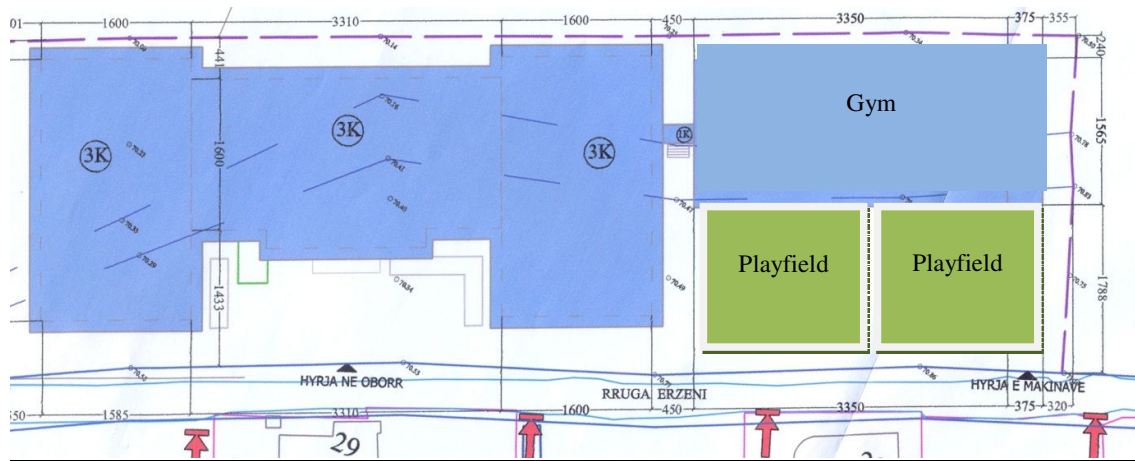


Figure 1 School General Layout, Bathore 6, Kamez

The new school building is located parallel with paved road “Erzeni” oriented North-East. The entrance of school is at paved road “Erzeni” (South-East). The school building is made of 3 and 4 floors, and intended as one unit including and the gymnasium. Gymnasium is a separate building with highest 6 m (highest of two floor).

The following table (table 2) presents planned facilities within the school itself and the gym. The general design guidelines relate to size of individual type of facilities, communication between facilities, emergency passes and access for people with disabilities, electric properties and lighting, safety requirements, telephony and internet, thermal insulation, heating outdoor landscaping, have been prepared.

Table 2 Planned facilities within the new school building

| Areas          | Description | Rooms |
|----------------|-------------|-------|
| Education area |             |       |

|                |   |    |
|----------------|---|----|
|                | Class rooms                                   | 27 |
|                | Physics laboratory                            | 1  |
|                | Chemistry laboratory                          | 1  |
|                | Biology laboratory                            | 1  |
|                | Computing laboratory                          | 1  |
|                | Poly functional room                          | 1  |
|                | Cabinet                                       | 3  |
|                | Library                                       | 1  |
| Administrative |   |    |
|                | Director                                      | 1  |
|                | Secretary                                     | 1  |
|                | Deputy director                               | 1  |
|                | Teacher room)                                 | 1  |
|                | Teacher room)                                 | 1  |
|                | Archive                                       | 1  |
|                | Dentist                                       | 1  |
|                | Physician                                     | 1  |
|                | Social assistant                              | 1  |
|                | Wach man                                      | 1  |
| Auxiliary area |   |    |
|                | Food serving area                             | 1  |
|                | Kitchen                                       | 1  |
|                | Gymnasium                                     | 1  |
|                | Stores  | 4  |
|                | Toilets for pupil                             | 5  |
|                | Toilets for teacher and limited ability pupil | 5  |
| Service area   |   |    |
|                | Oil tank                                      | 1  |
|                | Heater  | 1  |
|                | Total   |    |

The surface of the proposed site is appropriate for such structure. The surface of the site is 4160 m<sup>2</sup>, while according the project, the surface of the construction area (blueprint) is 1438 m<sup>2</sup>.



Figure 2 Future School site, Bathore 6, Kamez (School)



Figure 3 Future School site, Bathore 6, Kamez (Gym)

In school territory are included School building, courtyard and one volleyball field, two tracks, for running and for jumping and green area. Fencing is made of walls and steel bars that have a height 2 m.

### **SCHOOL SURROUNDINGS**

The proposed construction area is located at the north part of Tirana, about 1800 m far from national road Tirane-Kamez. The connection of the national road with school area is partially with asphalt road and partially with gravel - not paved.



Figure 4 Road orientation next to the school site



Name of the road “Padre Zef Pellumbi” – Asphalted road



Name of the road “Erzeni” – Partially with gravel and not asphalted for the moment but, under construction (please see the figure 8 in the chapter 6)

The site is owned by Kamza municipality and there is no current use of the site. In the early '90, the site was cultivated, i.e. used for agricultural purposes. There is no industry near the site. The only commercial building (see figure 3) in the area is storehouse for clothes and footwear.

#### *Geographical position*

The center of Kamza is situated 11 km away from the centre of the capital at its northwestern part. To the north Kamza it is confined to the rural area of Fush Kruja, to the south with the commune of Paskuqan, to the east with Zall Herr commune and to the west with Bexull commune. The terrain is

mostly flat, with a slight splay toward the north-western part. The area is situated in a quota which varies from 80-90 m above the sea level in the southern part, going down to 45m above the sea level in the northern part, close to Rinas Airport. The area of this administrative unit is 2364 Ha. The national road that connects the capital with northern part of the country goes through Kamza.

Kamza municipality developed in the last 15 years from an agriculture area with a small town Kamza into residential with constructed houses, social and education buildings and some business areas changing the area into to urban.

Many todays inhabitants of Kamza came from other districts causing increase in population and pressing need for now school.

The area is rapidly developing in these last few years. Housing construction is taking place everywhere around the area as part of Kamza Municipality. As result a rapid increase of population brought in a need for the new school. The number of pupils that this school will entail is 900.

Terkuza river

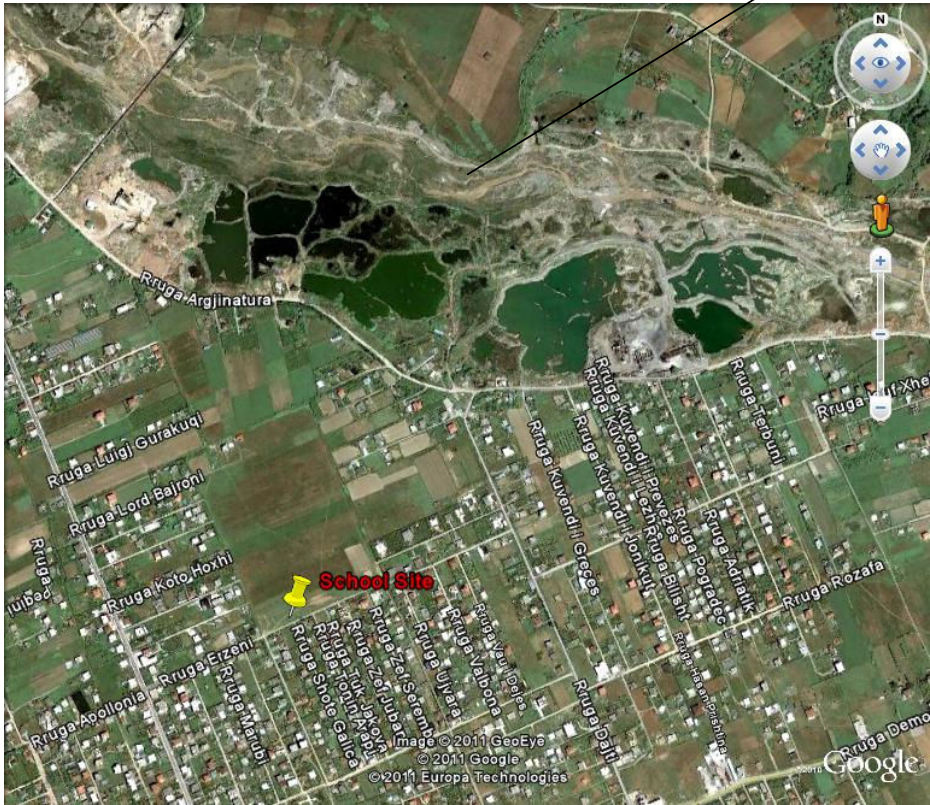


Figure 5 The school surroundings



## **ENVIRONMENTAL BASIC CONDITIONS**

### **PHYSICAL ENVIRONMENT**

#### **Meteorology**

##### *Temperature*

The temperature regime is typical for the Mediterranean, characterized by hot summers and cold winters. The average annual temperature is 16°C. The absolute maximum and minimum observed temperatures are 40 °C and- 6 °C respectively.

##### *Rainfall*

The rainfall regime is also typical for the Mediterranean. Only the 5-10% of the annual rainfall occurs during the dry season, and most rain falls in the winter. Average annual rainfall for the greater Tirane area is 1,108 mm. The maximum observed monthly rainfall is 211 mm.

#### **Geology**

The Tirana region pertains to the Neogenian and Quaternary area and is well represented by alluvial deposits of Tirana river which are intertwined with proluvial deposits, the latter represented in turn from coarse-grained materials to medium-sized brownish grey sands which appear to be rather thick in structure. Proceeding downstream from the river bed towards the banks these grow small in size and further beyond it they are patterned upon deluvial composition - highly sustainable alluvia's. Beneath this layer one could easily strike into neogenian deposits which are represented by sands and brownish grey color clays with weak cemented base owing to the activity of atmospheric agents and moisture, while at a depth of some 3-4 meters within the physical soil level one encounters strong clay layers intertwined with carbonic sands with the sporadic presence of flints/gravel which measure some 5-6 mm in length - which act to form the basis of the red hill in which there is considerable moisture, however, impermeable by water.

In the area under survey on the basis of the seismic regionalization of the Republic of Albania the construction site is part of the area characterized by low-intensity seismic activity on an open 8-point Richter MSK-64 scale. Any building in the area is recommended to withstand tremors of an earthquake up to 8 points on the Richter MSK-64 scale.

#### **Hydrography**

As far as the hydrology is concerned, it is safe to observe that the area under study does not have any surface waters, except of the Tërkuza river. School is distant approximately 600 m from the river bed. The Tirana river in its upper flow reaches consists of three branches feeding into it: the Mojsiti creek, the Selita one and the Zall-Bastar. The three creeks merge together to form the Shupal river. In the vicinity of some 2.5 km to the center of the Zall-Dajti commune, the river changes its name and is called the Tirana river and it continues downward its flow under this denomination until it joins with the Terkuze river and form the Gjole river. The underground waters are at low levels and depend heavily on the time of the season, which rush down the gradients and watercourses wherein the sandy and finely porous layers/strata are present. The level of ground water does not suggest use of any

above regular humidity of flood protection measures. This area is part of the morpho-structural clayey silicates in the wider area of the hilly chain of the lowlands which extend from Bovilla towards the Dajti Mountain and more to the east connecting Kamza with the Babrru village. This mega-structure assumed its own initial contours with further consolidations occurring towards the middle of the *moicen tortoniane* era which gradually experienced the continental conditions in the course of the entire *poliocenic* glaciers giving rise to formation of watercourses and a markedly differentiated relief as well as other ground water seepages with precipitations moving in the direction of the Babrroi creek. However, the relief itself peculiar to the area under the ever-increasing influence of the human activity interacting with other geo-morphological factors contributes considerably to the retention of all geo-morphological features accommodating the community which has settled down in the area.

#### *Water resources*

The area is bounded to the rivers of Tirana, Lana and Tërkuza, and the three of them flow down from the south-eastern part towards the north-western part going through the Tirana valley. The Tirana river and its affluent Lana River traverse the central part of Tirana valley, whereas the Tërkuza river flows down in the northwestern outskirts of the valley. The flows of these rivers have big fluctuations; Tirana river varies from 0.3 – 300 m<sup>3</sup>/sec; Lana River from 0.1–30 m<sup>3</sup>/sec and Tërkuza from 0.5–400 m<sup>3</sup>/sec or more. In the upper part of Tërkuza a high dike has been built, and water is mainly used to supply the city of Tirana. The natural regime of Tërkuza river has currently suffered fundamental changes due to the use of gravel from the river. To protect the residential areas from flooding an embankment has been constructed (see figure 5).

The surface and underground waters may be used as drinking water for their natural values, but at the same time they are threatened by the urban pollution. Referring to the hydrologic content of the area, the Kamza region is part of Tirana water basin, where two main water-collecting areas are defined in the upper part of this basin which is connected to the tortonian and quaternary deposits. The water collecting system is widely spread, where the deepest gravel water-collecting are located only in the north-central part of the study area, nearby Valias. The gravel layers, which form the most water-collecting part of the area, reach a cumulative thickness varying from 4-5m in the southern part and more than 20-30m in the northern part of the area. The water-collecting area fills up with surface waters from Tirana and Tërkuza rivers and drainage of rain water. This mostly occurs in the southern part of the wider Bathore and Kamez area, where the thickness of the clay deposits covering the gravel deposits is usually less than 5-6 meters.

#### *Underground resources*

Kamza does not have mineral resources of considerable impact on its future development, with the exception of Valias mine, which offers modest resources of coal.

With regard to the geologic structure of the area, the Tirana valley results to be a big synclinal hole, with more tortonian and quaternary deposits on the upper part. The Tirana synclinal valley is marked by a gradual slope towards the north-western part to the Adriatic sea. The tortonian deposits in Kamëz area are reflected by the “upper sand horizon”, consisting of a combination of sand-layers with clay and on-clay. The sand-layers cover about 15-20% of the lithologic appearance of this horizon. There are also coal-bearing layers which are exploited until 1990 in Valias colliery, located 2 km north-western part of Kamëz city. The quaternary deposits usually have an alluvial origin. They mainly consist of combined and sporadic layers of pure gravel, sand and gravels, as well as clay and on-clay. The thickness of quaternary deposits varies and its maximum values are 80-90m in the area of Valias, in the central part of the valley. The gravel residues over the valley’s bed come out only in rivers flow of Tirana and Tërkuza. Salt and clay residues come out in the other parts of the valley. Nevertheless, considering the lithologic observations taken out from various wells, it is observed that gravel residues are widespread in the depth of the entire valley. (ITA Consult/AWT © - Kamëz Municipality water supply emergency project, Hydro-Geologic study).



## **Infrastructure**

The Municipality of Kamza is located in the Greater Tirana Region and includes the Town of Kamza, five villages and two unplanned settlements. The Municipality, lies on the outskirts of the City of Tirana. The population of the Municipality's urban and peri urban areas has grown very rapidly over the past few years as a consequence of increasing migration from other parts of the country. The current population of Kamza Municipality totals around 95,000, of which around 40,000 live in the town and the remaining 55,000 in the peri urban and rural areas. As a result of the rapid increases in population, the provision water supply and wastewater services have fallen considerably behind the levels needed for a rapidly growing population. At present around 30% of the population has access to piped water while only about 18% are covered by the existing sewerage system. There is therefore an urgent need to improve the water supply and sewerage systems for the inhabitants of Kamza. School will however be connected to the water supply and sewerage system. The lack of adequate water and wastewater facilities pose a substantial threat to economic and social welfare of its inhabitants and those impacted by it downstream.

### **Drinking Water Quality**

The water supply services has been inadequate with poor pressures and widespread water rationing with supplies often restricted to only 2 to 3 hours per day in most areas.

Large majority of the 30% of the households that have access to piped also have shallow wells on the premises to fulfill their water consumption requirements. The remaining 70% of the population relies entirely on shallow wells. Most households have water storage tanks to collect water whenever supplies are available and/or to pump water from the shallow wells to overhead tanks. There are also a number of public taps in the town that are used regularly by the residents in the locality of these facilities. The population in the rural areas of the Municipality mainly relies on springs and shallow wells to meet its water consumption needs. The water quality from these sources is generally poor.

The distribution network is in poor condition and the level of water losses is not known with any certainty as a result of lack of distribution or consumer meters. Only large commercial premises are metered.

In our school site proposed, the infrastructure of water supply network is completed.

Most of the current problems with water supply services arise from severe water resources constraints and losses in the network. Three water sources are used to supply the Municipality: Laknas Wells, Vilias Wells and Bovilla Reservoir.

Kamez Municipality, with the support of various donors and founding programs, like for example European Commission, is working to rehabilitate the existing and to build the water supply network and eliminate water resources constraints.

#### *Laknas Wells*

The wells were designed for a combined capacity of 50/liters/sec but actually produce around 10 liters/sec due to various problems associated with design and construction.

#### *Vilias Wells*

The Vilias wells are the main source of supply for the Municipality There are four wells at Valias, around 6 km from the town, each with a design pump capacity of 35/Inters/sec or a combined capacity of 140 liters/sec. However, only three pumps work effectively and according to the Water Department

a reliable yield of only 80 liters/sec is achieved due to problems of electricity shortages and pump efficiencies etc.

#### *Bovilla Reservoir*

The Bovilla reservoir is mainly used to supply Tirana City and supply to Kamza is on the basis of an agreement with Tirana Water Company for an average daily supply of 2,500 m<sup>3</sup> which will be sufficient for continuous supply of water to school. The prospects of increasing supply from this source are favorable as there are competing demands from City of Tirana. Tirana Water Company (TWC) is improving also the infrastructure and capacity of water supply. Recently, TWC has completed construction of a new water storage deposit 6000 m<sup>3</sup>, and it is in progress another one with 6000 m<sup>3</sup> capacity. These investments will evidently contribute to the water supply in the Kamza Municipality.

For this project, the potable water of the network of Bovilla Reservoir that supplies the Bathore Zone, will supply Bathore 6 School. Water supply will be done using water pipes from public networks, using water pumps. As a reserve a special 5000 liter tank in volume will be constructed for the purpose of the secure potable water supply.. Specific demand is 20 l/pupil daily. Hot water will be supplied using electric boilers.

For this project purpose the Ministry of Health, Institute of Public Health in Tirana, tested on March 28, 2011, the potable water of the network from Bovilla Reservoir, that supplies the Bathore Zone, which will supply Bathore 6 School. Physical – chemical, microbiological and toxicological analysis were made. Analyses results show that the water is suitable for drinking. No coliform or streptococci bacteria, no PAHs or pesticides were found (analysis results are attached to this document).

#### **Air quality and emission source**

There is no air quality monitoring network in Kamza area. Nevertheless there is no thermo power plant or incinerator or heavy industry that may cause significant air pollution in the surroundings of the school.

Traffic in general can contribute significantly to air pollution; however, there are no major roads in school surroundings. The road “Erzeni”, running before school is under reconstruction (see the photo attached) and this road will be paved before school construction starts.

For this project purpose the Ministry of Health, Institute of Public Health (IPH) in Tirana, on April 13, 2011, has completed the technical expertise, for air quality in the site of Bathore 6 School. Experts of IPH, were accompanied by employees of the Kamza Municipality.

Measurements of the main indicators of air quality were conducted according to standard methods applied by the IPH. Results are given in Table 3.

Table 3 Results of the main air quality indicators

| No. | INDICATORS | MEASURED VALUE<br>( $\mu\text{g}/\text{m}^3$ ) | NORMA AL<br>( $\mu\text{g}/\text{m}^3$ ) | NORMA EU<br>( $\mu\text{g}/\text{m}^3$ ) |
|-----|------------|--|--|--|
| 1   | LNT        | 29   | 140                                      | 80                                       |
| 2   | PM10       | 25   | 60                                       | 40                                       |
| 3   | SO2        | 10   | 60                                       | 20                                       |
| 4   | NO2        | 14   | 50                                       | 40                                       |
| 5   | CO (mg/m3) | 1.1(mg/m3)                                     | 6(mg/m3)                                 | 5(mg/m3)                                 |

According the value measured for the main indicators of the ambient air quality, results show that all indicators are within the Albania and EU Directive Directives 1999/30/EC, 2000/69/EC, 2002/3/EC, 2008/50/EC.

### Soil Quality

For the project purpose, the Faculty of Natural Sciences, Center of Nuclear Physics took 5 soil samples in the study area and they analyzed it for heavy metals and radioactive isotopes.

The soil shows no radioactive pollution.

The concentrations of heavy metals are presented in the table below and are compared to New Dutch list for soil criteria used in the Netherlands for contaminated land. The new Dutch list defines intervention values and according to the table bellow nickel exceeds the threshold. The Dutch list levels are only an indication of higher concentration of metals that can (in some cases) be of natural or anthropogenic origin. The Dutch list is given for typical Dutch soils. Soil analyses for heavy metals done by Faculty of Natural Sciences Center of Nuclear Physics, confirmed that the concentration of all tested metals (including nickel) in the soil correspond to natural characteristics of the soil, according to geological characteristics of the area (reference Geographic Atlas of Albania authored by A.Tashko, A.Mazreku, at all. 1997-1998). Compared to the Dutch list, concentrations of Ni in the soil indicate rather high level, where some action is needed. Ni, although not accumulating in plants and animals can cause lung and respiratory system problems. For that reason, during construction additional sampling will be done, and if the results confirm the numbers from table 4, soil stripping will be done.

Table 4 Concentration of heavy metals in the soil compared to Dutch list

| mg/kg of dry soil | Sample 1 | Sample 2 | Sample 3 | Dutch list - action required |
|-------------------|----------|----------|----------|------------------------------|
| <b>Cr</b>         | 350      | 228      | 353      | 380                          |
| <b>Mn</b>         | 861      | 768      | 814      |                              |
| <b>Ni</b>         | 262      | 264      | 250      | 210                          |
| <b>Cu</b>         | 47       | 44       | 46       | 190                          |
| <b>Zn</b>         | 86       | 88       | 114      | 720                          |
| <b>Pb</b>         | 25       | 19       | 23       | 530                          |
| <b>As</b>         | < 10     | < 10     | < 10     | 55                           |

|           |       |       |       |    |
|-----------|-------|-------|-------|----|
| <b>Cd</b> | < 0.3 | < 0.3 | < 0.3 | 12 |
| <b>Hg</b> | < 0.1 | < 0.1 | < 0.1 | 10 |

The soil was not tested for oil/PAH pollution because: a) there is no history of economic activity on the proposed site or its surroundings which could indicate PAH oil pollution; and b) basic (organoleptic) examination of soil samples did not indicate any presence of such pollutants (see annex). In addition, previous land use (as well as in the surroundings of the site) did not include intensive agricultural activities, but small scale agricultural activities that ended in 1990s; therefore testing on pesticide presence was not carried out.

### Noise

Currently, there are no significant noise sources near the studied area. The site is located in peripheral zone. Traffic noises are in low level as these are not the major roads and traffic is not very frequent. There are no other significant sources of noise in this area.

The reconstruction of “Erzeni” road has started, and this road will be paved before school construction starts, i.e. by July 2011.

### BIOLOGICAL ENVIRONMENT

From an agriculture area with a small town Kamza, 15 years ago, is developed and in this area are constructed houses, social and education buildings and some working places changing the area to big urban area. Bathore area has been known for agricultural production, mainly for the broad bean and soya.

The area is characterized by the presence of low vegetation, herbs. The fauna, on its part, is characterized by amphibians (mostly frogs and snails). There is not any significant wildlife present in the area other than domesticated animals owned by the people in Bathore. In the biggest part of the area the bird population is somewhat considerable, consisting of a variety of birds from sparrows to doves. Yet the vegetation is not dense enough to sustain more species. The future school area is not in the vicinity of any nature protected site nor the site has protected plant or animal species present.

### Protected areas

The site selection of proposed study area for school construction is not included in the protected area list nor it is adjacent to it.

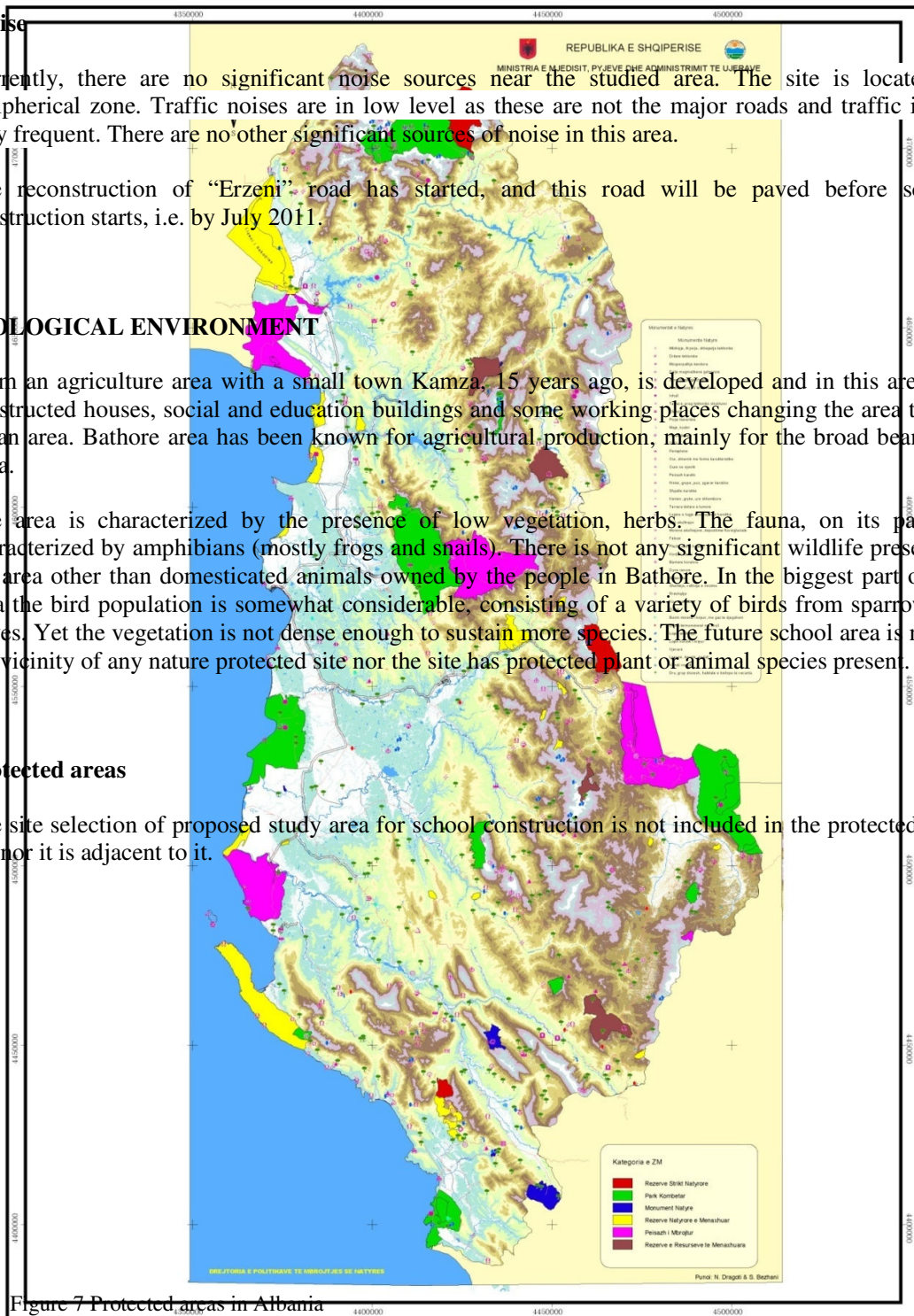


Figure 7 Protected areas in Albania

## SOCIAL AND CULTURAL ENVIRONMENT

### Tirana Region



Figure 8 Tirana region

The Region of Tirana and the capital city of Albania have gone through enormous change during the last 15 years. Internal migration and emigration have emerged as survival strategies for Albanian households.

Many people have left Tirana but many more have moved from other parts of Albania. In the last 15 years Tirana has become the perceived solution for many Albanians who want to build their lives in Albania. Initially, many families chose Tirana to lift them out of poverty, remoteness and exclusion.

Nowadays many others choose Tirana to have more space for their business ideas, social life, and education for their children. Tirana has become a city of different cultures and colours with a boosting economy and an ever-changing architecture. Including inhabitants and visitors, the region is home to almost a million people.

The Albanian metropolis is in need of improvements to infrastructure, administration, trade, civic education and environmental protection. Like a “melting pot” of urban stress, Tirana faces big challenges in ensuring quality of life for its people and the right conditions for its growing economy. Villages along the main roads have acquired an urban outlook due to the rapidly growing industries.

The Region of Tirana, constituted as a local government unit on 31/11/2000, includes two districts – Tirana and Kavaja consisting of five municipalities and 24 communes with a total area of 1,652 km<sup>2</sup>.

## Kamza Municipality

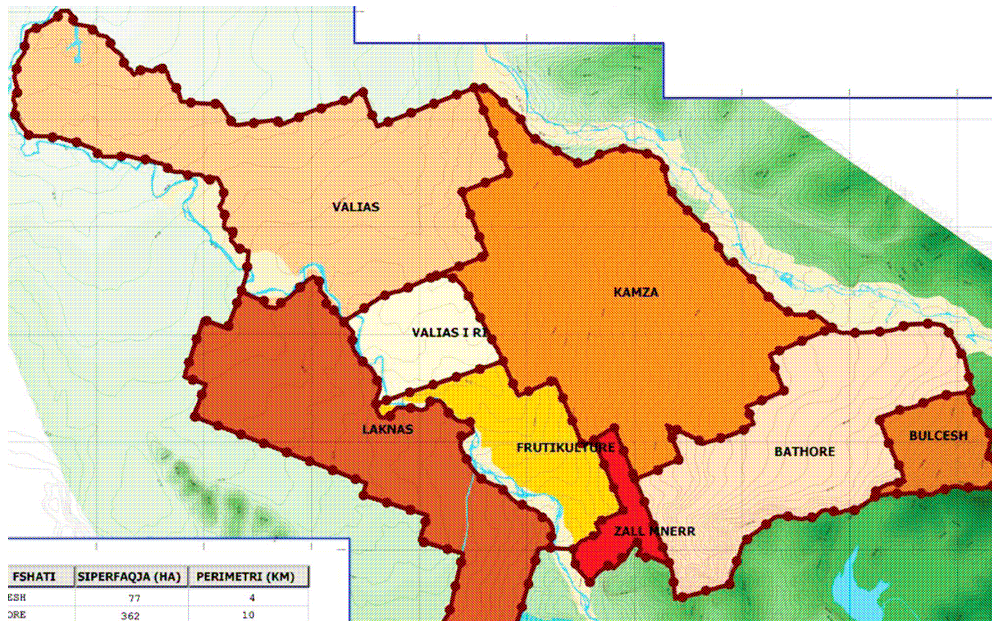


Figure 9 Administrative Divisions of the Municipality of Kamza

Kamza used to have a rural administrative status until 1996 when it was named a local Administrative Unit with the status of a Municipality included in the Greater Tirana District due to its demographic, socio-economic and urban development. Despite the urban development concerns, the Municipality of Kamza is considered one of the municipal units with the highest levels of structural changes in Albania.

Kamza is the first instance of a local administrative structure that comprises a number of smaller administrative divisions. At present, Kamza is administratively divided into the Urban Center (City), the Bathore administrative division and the 5 rural administrative divisions; Valias i ri, Laknas, Zall Mner and Bulcesht. After 1991 as a result of the free movement, considerable changes took place, related to the structure of land property and to the growing development opportunities in the private economic sector. Kamza is undergoing rapid changes and is expected to have a high economic development in the near future.

### *Economic information*

The economy of Kamza is characterized by a high level of informality and by the predominance of small scale and family businesses. There is a prevalence of businesses in trade and services. Small business dominates the economic structure of the Municipality of Kamza.

The services sector is the most developed; it accounts for about 48% of the employment rate. Next to the service sector, there exist a number of small-scale activities on construction, light industry and food processing. The Municipality of Kamza has benefited from the influx of the inhabitants whose aim is to settle in the direct vicinity of the capital, by offering an increased level of services. The area is characterized by an intensive urban development and by the fast and unplanned transformation of land.

Currently, there are 77 subjects operating as big businesses, 42% operating in the area of commerce, 29% in services, 17% in the area of production, 6% in transport and 6% in construction.

A total of 1192 small active businesses exists. 70% of the total number engages in commerce, 22% in the services area and 8% in the production area.

*Living Standards.* The living standards of inhabitants in Kamza have significantly improved, and this is indicated by the rate of the population growth, which has multiplied within the last two decades. There has been a considerable increase in the number of private housing units built from the families themselves, as well as the number of social, commercial, health and educational centers. The recent improvements on the roads infrastructure have enabled a better private urban transport and a faster communication with the urban centers in the city. The role of the civil society has been very active through their activities and trainings which involved many people from the community, women, men and children. The construction of new private sports and cultural centers has had an impact on invigorating the cultural and sports life, especially for the young generation. A sensitive issue remains the lack premises that limit the involvement of more people in art and culture.

*Health Care.* In Kamza, there are 10 primary health centers, with a staff of 13 family doctors, 5 specialists, 3 consultants for women and children and 25 support staff. There are 8 drugstores that provide private pharmaceutical service and 12 private clinics that provide dental care service.

In Kamza, there are 7 kindergartens hosting 1647 children. There are 8 colleges hosting 10,491 pupils, 2 high schools hosting 2,469 pupils, and 1 vocational high school (covering the areas of auto-mechanic, agricultural, agribusiness, hotels tourism) hosting 687 pupils and 800 students following the university studies).

## **ALBANIAN ENVIRONMENTAL LEGAL FRAMEWORK AND WORLD BANK PROCEDURES**

### **5.1 ALBANIAN LEGAL FRAMEWORK**

#### ***5.1.1. Objectives in environment field***

Albania has an environmental legal framework that is adapting gradually to European Union legislation.

Institutions are organized or are being organized to implement, monitor and enforce laws, but there is still a long way ahead to achieve sustainability.

The Ministry of Environment, Forests and Waters Administration (MEFWA) is the authority that approves the request for EIA. This ministry has 12 Regional Environment Agencies (REA), which are responsible for the implementation of environmental legal aspects. These agencies approve relevant EIAs in principle.

#### **5.1.2. Principal strategic documents in environmental field**

##### *Cross Sector Environment Strategy*

The *Cross Sector Environment Strategy 2007* (CSES) is a basic document that sets the State policy in environmental protection field. The final goal of its development, approval and implementation is to meet its constitutional obligation towards citizens that enjoy the right to a healthy and ecological environment, sustainable development of Albania by rational use of natural resources, preserving them from pollution and degradation and promotion of environmental values in order to turn them into important assets for the further economic development of the country.

The environment as a sector needed a "cross sector" strategy. This conception accepts firmly the shared responsibility among many government institutions, of central or local level on environmental protection and achievement of a sustainable country development.

The CSES is supported by more detailed action programs that address specific issues such as:

- Strategy and Action Plan for Biodiversity,
- Strategy for Development of Forests and Pastures Sector,
- Strategy for Fisheries and National Plan of Waste Management.

Though there is legislation and bylaws for construction sector, urban and territory, development, yet their implementation is still not as it should be. The responsibilities of the various institutions, agencies and organizations that operate and have powers in this sector are often overlapping, dim and unclear. This chapter presents the basic legislation that operates and regulates developments in sector of construction and territory control and other laws related indirectly.

Legislation regarding territory and urban development control:



- Law No.9482 of 03.04.2006 "On Legalization, Urbanization and Integration of Illegal Buildings"
- Law No.8405 of 17.09.1998 "On City Planning", amended
- Law No. 8402 of 09/10/1998: "On Construction Control and Disciplining"
- Law No.8652 of 07.31.2000 "On Local Government Organization and Functioning"
- Law No.9244 of 17.06.2004 "On Agricultural Land Protection"
- Law No.9048 of 04.07.2003 "On Cultural Heritage"
- Law No.9780 of 16.07.2007 "On Building Inspection"
- Law No. 9232 of 13.05.2004 "On Social Programs for Housing of Residents in Urban Areas." amended by Law No.9719 of 23.04.2007.
- Law No.9290 of 10.07.2004 "On Construction Products"
- Law No.9780 of 07.16.2007 "On Construction Inspection".
- Decree No.722 of 19.11.1998 "On Approval of City Planning Regulation "

After 2002 Albania put great effort in establishing an environmental legislation framework. This legal framework includes all types of legislation ranging from Constitution of Republic of Albania, general environmental laws and its specific components, Council of Ministers Decrees, orders and instructions of ministries, specific regulations, norms and standards etc. This framework is based on the European Union standards and it was also compiled with foreign experts' assistance, respecting international conventions whereof Albanian State is a party.

However, the implementation of environmental legislation and adjustments continues to be in an intensive process of completions and improvements, in order to adapt to the best environmental standards and norms so as to ensure a sustainable development of country's economy.

Reporting on Environmental Impact Assessment is based on the following environmental legislation and it aims to identify, envisage, minimize and even prevent the activity negative impact on environment.

**Law No. 8934 of 09.05.2002 "On Environment Protection**, amended by Law No. 9890 of 03.20.2008 in Article 26" Environmental Impact Assessment Process" sets the obligations for provision of Environmental Permit of natural and legal entities who request to exercise an activity that has impacts on environment. Chapter IV of this law "Permit on activities with environmental impact" Articles 35-48 define modalities of environmental permits issue.

**Law No. 8990 of 23.01.2003 "On Environmental Impact Assessment"**

Chapter II, "Environmental Impact Assessment" Article 4, Section 2 defines the review levels for Environmental Impact Assessment:

- a) profound EIA process
- b) summarized EIA process

in points 3 and 4 of this article define activities that should be subject to the above levels.

### **Decrees of Council of Ministers (DCM) and guidelines:**

- Decree No.103 of 31.03.2002 "On environment monitoring in Republic of Albania"
- Decree No.249 of 24.04.2003 "On approval of documentation for environmental permits and environmental permit elements"
- Decree No.268 of 24.04.2003 "On certification of specialists for environmental impact and environmental audit assessment."
- Decree No.805 of 04.12.2003 "On approval of list of activities affecting environment, for which Environmental Permit is required.
- Decree No.24 of 22.01.2004 "On environment inspectorate activities"
- Decree No.177 of 31.03.2005 "On allowed norms of liquid discharges and criteria"
- Decree No.1189 of 18.11.2009 "On regulations and procedures for drafting and implementation of national program on environment monitoring"
- Guideline of Minister of Environment No. 3 of 17.08.2004 "On approval of list of activities, application formatting, rules and procedures for consent and environmental authorization granted by REA.
- Regulation of Ministry of Environment No. 1 of 17.08.2004 "On public participation in environmental impact assessment process"
- Guideline of Minister of Environment No. 1 of 30.11.2005 "On service fees for Environmental Permit"
- Guideline No. 6 of 27.12.2006 "On approval of methodology of preliminary environmental impact evaluation of an activity."
- Guideline No. 2 of 21.05.2007 "On approval of list of activities with environmental impact, mode of application, rules and procedures for environmental authorization and consent issued by Regional Environmental Agencies."

### **5.1.3. EIA Report**

Law No. 8990 of 23.01.2003 "On Environmental Impact Assessment", does not recognize construction of schools as an activity which would require an EIA; however, based on this law, some relevant Decrees and guidelines are issued for this purpose.

- DCM No. 249 of 24.04.2003 "On approval of documentation for environmental permits and environmental permit elements"
- Guideline No. 6 of 27.12.2006 "On approval of methodology of preliminary environmental impact evaluation of an activity."
- Guideline No. 2 of 21.05.2007 "On approval of list of activities with environmental impact, mode of application, regulation and procedures for authorization and environmental consent issued by Regional Environmental Agencies."

- Guideline No. 5 of 28.12.2007 "On service fees for environmental permits" of Minister of Environment, Forestry and Waters Management.
- Instruction No. 1 of 07.01.2008 "On necessary documentation for requesting environmental permit".
- Order of Minister of Environment, No.429 of 17.11.2009 "On regulation and procedures for issue of environment permit in the framework of National Licensing Center.

On the basis of the above legal provisions, based on the Guideline No. 2 of 21.5.2007 of the Minister of Environment, Forestry and Waters Administration, the construction of this facility: 9 years School, Bathore 6, Kamez, is included in *Annex 1 - List of local activities provided with Environmental Authorization*, and categorization belongs to "Construction of residential and service facilities, with a surface bigger than 1000 m<sup>2</sup>." but also in *Annex 2 - List of Local Activities provided with Environmental Consent, Item 2) Special social and cultural objects, Item b) Schools*

This implies that for the construction of schools, the preparation of a file for Environmental Authorization or Consent is required.

*1)-List of documents to be submitted to REA for environmental authorization issue:*

- d) - Summarized report of environmental impact assessment of the activity, compiled by certified environmental experts.

*2)-In the case of Environmental Consent, documents should be presented to REA for the environmental authorization issue.*

- c) - A brief report of the environmental impact assessment.

Based on Guideline No. 6 of 12.27.2006 "On approval of methodology of preliminary environmental impact evaluation of an activity", knowing the considerable environmental impact of construction sector, taking into account the large surface of construction site and the surface of facility building, as an expert of the field, the project environmental consultant recommends that the activity "Construction of 9 year School, Bathore 6, Kamez", should be provided with Environmental Authorization, and conditions included in this document should serve as a baseline document for issuing Environmental Authorization and after which permit.

#### **5.1.4. Service Fee**

The Ministry of Environment, Forests and Waters Administration, the competent authority to issue Environmental Permit, set service tariffs.

Based on Guideline No.5 of 28.12.2007 "On service tariffs for environmental permits" of the Minister of Environment, Forestry and Waters Management, item 14) tariffs for issue of Environmental Authorization, item a) for activities all items of Guideline Annex I, the service tariff is 20,000 lek, with the exception of Annex items 4, 5, 8, 9, 15, 17, 19, 21, 25, 26, 27, 28, 29, 32, 43, 35, service tariff of which is 10,000 lek.

The service tariff that the investor will pay to the Ministry of Environment, Forests and Water Administration is 10,000 lek.

## 5.2 WORLD BANK PROCEDURES AND PROJECT REVIEW

The Bank assesses every project against its safeguard policies. A World Bank environmental review classifies projects as category A (significant adverse environmental impacts), Category B (potential adverse environmental impacts less serious than category A) and category C (probability of minimal or no negative environmental impact). An Environmental Assessment made confirms that the project will not have significant, irreversible, cumulative or long-term adverse impacts, and no potential A category subprojects shall be financed.

Since expected adverse impacts will not be significant or irreversible, and since they can be prevented or reduced through appropriate preventive actions or mitigation measures, the Project is classified as a Category "B" project, which requires only partial environmental assessment under this policy. To ensure that these issues are duly recognized, described and addressed, EAs are prepared for individual sub-projects. This EA, with its EMP ensuring that recommended preventive actions and mitigation measures will be taken, satisfies World Bank OP 4.01 policy on Environmental Assessment.

A Project Operation Manual (POM) was prepared, which describes environmental due diligence procedure and subprojects screening. The POM presents also the overall environmental management plan. The POM review procedure requires preparation of documents for Environmental Assessment of different fields for each subproject as shown in table 2, because investments envisaged under the project might have different levels of environmental impacts. Therefore, for the school rehabilitation activities, POM section in the EMP defines environmental mitigation measures and monitoring, whereas for enlargement or construction of new schools within the existing schoolyard, the POM determines the requirement of preparing an Environmental Management Plan (EMP) checklist for each subproject. For construction of new schools on new sites, Environmental Assessments with the EMPs will be prepared as the impacts will depend on the chosen location, i.e. previous activities on the site, distance from protected historical or nature sites, etc. Table 3 contains required Environmental Assessment documents. Because of the need for land acquisition, the project employed Compulsory Resettlement (OP/BP 4.12) policy. Land acquisition will be done according to Land Acquisition and Resettlement Plan, which is prepared.

Table 3 Subprojects environmental screening table

| Types of Category B Activities | Required Environmental Assessment Documentation   | Applicable to:  |
|--------------------------------|---|---|
| 1.                             | Environmental Assessment (EA) with Environmental Management Plans (EMP) for each individual construction (subproject) | New schools on new sites                                    |
| 2.                             | Specific EMP for the site, for each school in the form of a checklist   | New schools or enlargements on existing schoolyards.        |
| 3.                             | EMP is not necessary. General measures described in POM are applied   | Rehabilitation of existing schools on existing schoolyards. |



## POTENTIAL ENVIRONMENTAL IMPACTS

The environmental impacts of the project are expected to be manageable, temporary and of local impact, since they relate to general construction activities on an already known site. These include usually: a) Dust and noise due to excavation, demolition and construction; b) Management of demolition and construction waste and accidental spillage of oils and lubricants, etc., c) Infringement of private property limits; cd) Risk of damage to historical or cultural properties or unknown archaeological sites; de) Traffic disturbance; ef) Impacts/damage to ecosystems; and fg) Impacts on waters of the area. Site specific impacts are described more in details in sections 6.1, 6.2, and 6.3. The same sections pay special attention to description of selected site and current impacts on it.

### ENVIRONMENTAL IMPACTS RELATED TO LOCATION ITSELF

The site is located in a not very densely populated area (individual houses, no multistoried buildings), with low traffic and no industrial activities. The only envisaged impact to the school is the road proximity, as it represent source of noise and raises potential safety issues.

#### **a) Proximity to road**

The Kamza Municipality has allocated a budget for reconstruction for reconstruction of the road “Erzeni”. and has awarded a contract. The reconstruction works have start and will be finalized before the school construction starts.

The new school building is located parallel with road named “Erzeni”, which is under construction. The entrance of school is planned to be from at this road.



Figure 10 School site and road “Erzeni” under reconstruction.



The speed limit, based on the proximity distance of the road with hde to the school, should be 25 km/hrs ( this speed might be further limited by the Kamza authorities in the proximity of the school site) and we strongly recommendedrecommened placing of the school warning signs on the road, beside speed limitation signs.

Because of the proximity of the road to a school site, the additional safety measures should be applied to minimize the impact of the noise and increase safety. These measures should include good and responsible engineering practices like noise protection wall, fencing and preventing direct the access to the road for children and pedestrian from the school site, beside marked yard exits as well as the limitation of speed on that road section (mentioned above).

These technical measures should be incorporated into main design and reviewed by environmental consultant in MoES. In addition, when choosing building material for school, materials with better sound insulation should be preferred (type of insulation, noise protection walls, etc.) to maintaininmaintain the maximum noise levels of 35 – 40 dB at school premises.) Due to the low traffic in the area, a special measures, beside good and responsible engineering practice (fencing, noise protection wall, etc.) , would not be required.

**b) Soil quality on school site.** Based on measurements of Applied Nuclear Physics Center and values of different measured parameters, *there is no pollution of anthropogenic nature*. Olfactory (sensory) inspection showed *no signs of any organic pollution*. Radio-activity concentrations, environment gamma doze, and natural and artificial radioisotope activities, are in such levels that correspond to natural land fund, and present no danger to environment or people. Concentrations of heavy metals reflect natural characteristics of the soil in this area. This implies higher concentration of especially nickel For this reason implementation of the certain measures is required. If additional sampling and analysis confirms the results provided in the table 4, soil stripping (about 20 cm) or soil isolation will be done. This will depend on purpose of area. For example, all green areas should be stripped and soil should be replaced. Surface isolation with other kinds of materials would suffice for paths and access roads.





## **ENVIRONMENTAL IMPACTS DURING CONSTRUCTION PHASE AND MITIGATION MEASURES**

Engineering construction will include construction of buildings, playground fields, site paving, paths and connection to sewage. The following actions are expected: soil excavation, foundation construction, walls, plastering, waterproofing, tiles paving, partition of facilities, collector construction, painting, network installation for water supply and sewerage and soil leveling.

The Construction area fencing will be made by sheet metal in its entire perimeter to prevent unauthorized access, accumulation of various solid wastes, to make a better organization plan of site and to avoid also the negative impact that works create.

This Environmental Impact Assessment Report was drafted and it examines the facility construction and operation phase. The following materials are envisaged to be used in school construction:

*Wood materials*, including planks to be used to make frames, beams to hold frames. It is necessary during the construction process to select, and store all wood materials according to destination use in the construction site. It is necessary to separate and eliminate all used wood materials that can no longer be used in special places designated for this purpose.

*Construction iron* should be of high quality, controlled and certified, in order not to have radioactive radiation as required by Albanian legislation. It should be stored on a special place in the site, separated from other materials near the places where it will be prepared for construction. It is necessary for iron materials not have contact with underground waters. This is recommended in order to stop iron oxides from entering into water holding formations, which could bring about their pollution.

*Cement* should be systemized in store and packaged, never open. It can be used unpackaged only when it is kept in silos and has no contact with open environment. In concreting processes prepared and unprepared cement should not be spilled inside and outside the construction site, in order not to pollute the land surface and prevent its penetration in depth, where it may pollute underground waters. When during concreting processes excessive concrete is left, it should never be deposited in open environments inside and outside the construction site, but it should be taken to the special place near the section for concrete preparation.

Different construction materials as *sand and gravel* in the site construction should be kept in special places and covered with oilcloth. This is recommended in order not to have air pollution during strong winds. It is also necessary to keep them wet with water during their use so as to minimize distribution of powdery particles in the air, which might pollute it and consequently its quality would not comply with allowed norms for PM 10 contents.

*Mortar* prepared in construction site should not be in contact with ground cover but it should be isolated from it by placing it on impermeable material as oilcloth, or on tracks prepared before.

*Bricks* should be systemized in the construction site and waste from their transport should be collected and transported in special places for them.

### **Air pollution**

Construction activities may cause spread of dust in the atmosphere and a significant reduction of local air quality mainly due to vehicles driving on unpaved surfaces, vehicles driving with uncovered load and through emissions of poorly maintained machinery.

These impacts can be reduced to minor levels through standard practices of good site management, such as water sprinkling to limit dust emissions in the area near the construction materials and non-asphalted roads, covering of surfaces with plastic covers during storage and materials transportation, limiting vehicles speed (30 km/h) in the area and access roads, periodical cleaning of site and access roads, efficient use of modern attested construction machinery to minimize emissions, provided with mufflers and they should be maintained in good and efficient operation condition.

To minimize dust from construction material collection, the time materials are kept on the site should be reduced to a minimum, in order to minimize exposure to wind erosions.

Air quality will be mainly reduced due to construction and transport activities. Building construction requires excavation, which is usually accompanied by dust dissemination in the atmosphere, mainly PM10, which causes air pollution.

### **Waste generation**

Waste generation is expected to have the most important environmental impact. The foreseen works under the project will produce several types of waste. They are classified according to European waste catalogue and hazardous waste list since Republic of Albania harmonized the waste legislation to the EU legislation. This chapter presents only the waste group names, which are marked with numbers as in the European waste catalogue. Types of waste under each group can be marked with sign (\*) which represents hazardous waste. The exact waste subgroup with its key identification number will be identified on site.

Major waste group types expected on the site may be as follows, but other wastes are not excluded:

- 08 *Wastes from manufacture, formulation, supply and layers use (paints, varnishes and glass enamels), sealants and printing inks;*
- 13 *Oil wastes and liquid fuel wastes (such as hydraulic oils from equipment);*
- 15 *Package waste; absorbents, wiping cloths, filter materials and protective clothing that are not otherwise specified;*
- 17 *Construction and demolition wastes (including excavated soil from contaminated sites); and*
- 20 *Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions.*

### **Prevention measures of waste management**

Hazardous waste is expected in low quantities. In new constructions it will include different residues of varnishes, paints, as well as oil wastes from equipment. These wastes should not be mixed with solid ones. The contractor is obliged to provide special labeled containers for these types of waste.

For hazardous waste, the contractor has to follow hazardous waste separating procedure on the site. The contractor has to hand over the waste to the company authorized for hazardous waste management and to complete the accompanying documentation which should be kept as evidence of good practice in waste management.

It is recommended to separate different waste types (plastic and glass package) for which there are special collecting/recycling systems from non recyclable waste and they should be sent to appropriate collection places together with accompanying documentation.

Non-recyclable waste has to be sent to an approved landfill.

The construction site will be cleaned and all trash and waste materials will be disposed in accordance with clauses specified estimates. Illegal burning or waste dumping is strictly forbidden. Municipal waste and other waste have to be collected in special containers designed for that purpose and they will be regularly removed.

Removal of soil that will come out during excavation of foundations shall be carried out with in a very short time from their creation with no pollution to the surrounding environment. Removal will be made between 17:00 and 19:00 taking measures to avoid traffic disturbances during rush hour. The cargo will as well be covered or wetted to minimize road and air pollution.

### **Noise**

Noises are an unavoidable environment impact during construction. Noise may be limited by following good management practices (calibrated equipment/machinery) which means that works will be carried out only during regular hours of daily work shifts.

Construction equipment shall meet all applicable standards of the EU Directive 2000/14/EC on the noise emission in the environment by equipment for use outdoors. This Directive applies to manufacturers of equipment that cause noise. All equipment must be maintained in good operating condition and be attested.

Time of building materials transport in exit routes will be set carefully in order to avoid any local traffic concern. Construction site operation will be stopped from 19:00 hrs to 7:00 hrs every day.

Noise pollution may originate from vehicles driving at site. In the project under study, noise will be caused mainly during the construction phase by heavy excavation, transport, loading/unloading machinery.

Noise will be temporary. Employees will be asked to implement technical security measures in work, as use of ear phones.

### **6.2.4 Soil and water pollution**

Soil and water pollution is not expected as it can be prevented. However, soil and water pollution may be caused by direct or indirect contamination due to accidental spills or careless use of hazardous materials such as fuels, equipment lubricants, paints, varnishes, etc.

Potential impacts and their effects on surface waters during construction include: incorrect storage of fuel by contractor and activities on site that may bring about accidental spills of liquids or contaminated leaks and consequential deterioration of surface waters quality.

The site will have appropriate measures to control erosion and sediments such as hay bales and silt fences to prevent sediment from moving and causing excessive turbidity in nearby drainage.

Keeping heaped materials for a long time on the site should be avoided. If it is temporarily required, proper storage conditions should be created on site, for example, the use of covers for protection from atmospheric conditions. All materials should be kept and handled in accordance with instructions included in Material Safety Data Sheets (MSDS) available at the construction site. Training of operational staff and construction staff on safety measures and mitigation measures will continue.

If installation of fuel storage tanks will be needed, they will have secondary tanks with sufficient volume to contain a spill from the largest fuel tank in the structure. The containment area will have a device (pump) to remove accumulated water.

Materials to be used will originate from licensed activities of quarries, asphalt and gravel.

Construction works will not cause deterioration of underground waters regime of the area where the site is and on drainage system. Drainage channels of the area will be connected to discharging channels of project site, but without intervention that may destroy their operating system.

### **6.2.5 Archeological accidental finds**

There are no significance archaeological centers near the site, so no specific archaeological protection measures are required. However, if during excavations some archaeological finds are encountered, works will be stopped immediately and the competent local authority will be informed. Works will resume only after appropriate measures have been taken as required by relevant authority and after it confirms that works may continue.

### **Flora and Fauna**

The site and the surrounding territory where the project will be applied do not comprise any sensitive area or area of special protection status.

The territory on which the construction site is located will be completely stripped off from vegetation layer. After construction works completion, the area will be rehabilitated and grass will be sown.

## **ENVIRONMENTAL IMPACTS DURING OPERATIONAL PHASE**

The environmental impacts during the operational phase related to project investments concern primarily waste generation and treatment of hazardous substances in laboratories.

### **Waste generation**

Waste generated during operation relate to maintenance activities and regular school operation activities.

Potential types of waste are classified according to the European waste catalogue and hazardous waste list since Republic of Albania is approximating waste legislation with the EU legislation. Waste marked with item (\*) in the catalogue represents hazardous waste.

The (hazardous and non-hazardous) waste should be divided, collected and stored according to Law on Waste.

Hazardous waste (which includes laboratory chemicals and its package – group 15 according to waste catalogue) present the primary concern. Special signs and MSDS should be placed in laboratory near the sinks to avoid chemicals and hazardous mixtures spilling. At the beginning of the school year a teacher of natural sciences should dedicate one class to treatment of chemical substances.

Labs should have special containers for chemicals and to be disposed. Chemical waste treatment should be made by teachers of natural sciences. In addition, special containers should be available for collection of spilled chemicals.

Waste should be handed over to the company authorized for hazardous waste, which should provide the school with documentation on disposal methods.

Municipal waste should be collected by the company that collects waste and they should be disposed at the landfill.

The major expected waste groups are as follows, but other kinds are not excluded: package, chemicals and municipal waste.

## **ENVIRONMENTAL MANAGEMENT PLAN**

The current Environmental Management Plan (EMP) includes measures to address potential impacts during construction activities preparation and school operation. Mitigation plan with impacts, measures and identified responsible parties, is presented in tables 3, 4 and 5 and Monitoring Plan for these mitigation measures is included in table 6.

During construction, the contractor will implement all environmental mitigation measures. The MoES will consult the World Bank team on the acceptance of design and proposed measures expected to be implemented prior to construction. The MoES, Municipality and the Supervisory Engineer (consultant contracted by MoES) will monitor EMP implementation during the construction phase. During the operation phase, the environmental mitigation measures will be applied by school staff. Supervision during operation will be done by teachers of natural sciences and REA inspectors. Overall potential environmental and safety impacts can be avoided easily by adopting good engineering practices.

In monitoring project preparation, specialists will consider the possibility to perform a realistic monitoring of elements with environmental impact. In the construction phase, monitoring will include routine inspections by the entity that will implement the works and local government and investor itself.

MoES will ensure that the contract documents include relevant environmental protection clauses and that the EMP is an integral part of the contract. . The Contractor that will execute the civil works will also follow requirements of current Albanian construction and environmental regulations. To assure a degree of influence on Contractor's environmental performance it is recommended that an appropriate clause is introduced in works contracts, specifying penalties in case of noncompliance with the contractual environmental provisions, for example, in the form of withholding part of payment, the amount thereof depending on contract breach gravity. The contract would in that case provide for contract termination in extreme cases. A monitoring report by the engineer supervising the works will be a condition for full contract payment, equal to technical quality criteria or quantity surveys. Compliance with Albanian regulations and present EMP terms will be monitored and verified by regular visits of Supervisory engineer and random visit on the ground by the MoES environmental consultant and Municipal representatives. The Supervisory Engineer will supervise construction works and EMP implementation. The Supervisory Engineer will prepare biweekly reports on EMP implementation for MoES, and a) ensure that it is updated and relevant to the situation on the ground; b) ensure that non-compliance and corrective actions are appropriately documented; c) review implementation status; and d) evaluate corrective responses of contractor. The Supervisory Engineer will pay attention to every new critical issue that may come up during construction works and will inform MoES and suggest actions for various agencies. MoES will report on progress to the Bank regularly. Semi annual reports on overall safeguard compliance for all civil works will be submitted to the Bank.

The MoES together with school management and maintenance team should implement EMP mitigation measures during after the school is operational.

Relevant Government authorities (National Environmental Inspectorate) will be involved in auditing the school construction; the MoES should provide them with the appropriate monitoring appropriate monitoring reports. Tables 4 and 5 summarize the proposed mitigation proposed mitigation activities expected from the contractor and to be supervised by Government authorities prior to the construction and during the construction, including frequency and duration of monitoring. Table 6 presents the expected mitigation measures to be in place once the school is operational. Table 7 presents the Environment Monitoring Plan to be used as a guideline for supervising the construction and reporting back to the MoES and Bank.

Table 5 Environmental Mitigation Measures and actions required prior to Construction Phase

| Impact due to:                         | Impact Mitigation Measure   | Place and Time of Performance       | Implementation Cost  | Person in Charge             | Control function performed by:                     |
|--|---|-------------------------------------|--|------------------------------|--|
| Proximity of paved road "Erzeni"       | <p>Because of road proximity to school site, additional measures should be reflected in the design to minimize impact of noise and increase safety. Noise measures should be designed to reach 35 – 40 dB level in the school premises. These measures, presented in noise reduction, could include noise protection wall, fencing and preventing access to the road as well as limitation of speed on that road section.</p> <p>A Noise Reduction Assessment will be prepared as part of the design according to Albanian legislation.</p> | Design phase, prior to construction | The designer will bear the cost of the preparation of Noise Reduction Assessment, and all measures will be reflected in the design. The implementation cost of these measures will be borne by contractor. | Kamza Municipality, Designer | MoES, REA Inspection, Civil engineering inspection |
| Continuous potable water supply issues | The school design should incorporate construction of the 5000l reservoir  | Design phase, prior to construction | The designer will bear the cost of the preparation. The implementation cost of these measures will be borne by contractor.   | Designer                     | MoES, REA Inspection, Civil engineering inspection |

Table 6 Environmental Mitigation Measures for the Construction Phase

| Impact due to: | Impact Mitigation Measure | Place and Time of Performance | Implementation Cost | Person in Charge | Control function performed by: |
|----------------|---------------------------|-------------------------------|---------------------|------------------|--------------------------------|
|----------------|---------------------------|-------------------------------|---------------------|------------------|--------------------------------|

|  |   |  |   |                   |   |
|--|---|--|---|-------------------|---|
| <p>Air pollution related to transfer of materials, stockpiling and poorly operating vehicles</p> | <p>Dust from transportation of construction material and waste will be minimized by use of water, by minimizing speed of vehicles and by covering the cargo when supervising engineer demands it. Transport should be avoided on access roads during peak hours.</p> <p>Dust from stockpiling should be prevented, by covering materials and reducing the stockpiling period</p> <p>Sidewalks and roads should be kept free of debris to minimize dust</p> <p>All vehicles should be maintained in good condition and possess certificates.</p> <p>During soil excavation work, workers should be equipped with masks. To minimize dust generation during excavation soil should be lightly watered</p> | <p>During all time of construction</p> | <p>They could be significant</p> <p>Contractor's obligation may be transferred to contractor by the agreement of municipality of Kamza / MoES</p> | <p>Contractor</p> | <p>Site supervising engineer, MoES<br/>REA Inspection</p> |
|--|---|--|---|-------------------|---|



|              |  |  |   |                   |   |
|--------------|--|--|---|-------------------|---|
| <p>Waste</p> | <p>Waste collection and disposal pathways and sites should be identified for all major waste types expected from construction activities.</p> <p>Different types of waste should be separated and stored in appropriate containers on the site.</p> <p>Waste should be collected by licensed collectors</p> <p>Records of waste disposal will be maintained as evidence of good management.</p> <p>Whenever feasible, contractor will reuse and recycle appropriate materials.</p> <p>Hazardous waste is expected to be in small quantities and it has to be separated from solid waste, i.e. collected in separate containers.</p> <p>Hazardous waste can include but is not limited to varnish and pain residues, spilled or waste lubricants from equipment, batteries, etc.</p> <p>For hazardous waste, contractor has to follow the procedure for hazardous waste management, this implies collection, and waste handover to company authorized for hazardous waste management and completing accompanying documentation.</p> <p>Burning or illegal dumping of waste is strictly forbidden.</p> <p>Soil excavated from site should be removed and disposed on site agreed upon with Municipality and Ministry of Environment.</p> | <p>During the entire construction time</p> | <p>They could be significant</p> <p>Contractor's obligation may be transferred to contractor by the agreement of municipality of Kamza / MoES</p> | <p>Contractor</p> | <p>Site supervising engineer, MoES<br/>REA Inspection</p> |
|--------------|--|--|---|-------------------|---|

|   |   |  |   |   |   |
|---|---|--|---|---|---|
| Noise   | <p>Limit the work from 7:00 a.m. to 7:00 pm</p> <p>Meet general precautionary measures for noise mitigation on construction site (equipment certification). Construction equipment shall meet standards in the EU Directive 2000/14/EC, May 2000.</p>   | During the entire construction time                          | Part of the contractor regular practice   | Contractor's obligation may be transferred to contractor by the agreement of municipality of Kmaza / MoES | Site supervising engineer, MoES                   |
| Accidental spills in water and soil                   | <p>If there will be a need to install fuel tanks they will have secondary tanks with sufficient volume to contain a spill, or 110% of the largest tank, or double layer containers will be installed.</p> <p>The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and/or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby channels.</p> | During construction period                                   | Contractor's obligation may be transferred to contractor by the agreement of municipality of Kamza/ MoES  | Contractor  | Site supervising engineer, MoES<br>REA Inspection |
| High level of nickel in the soil                      | Although not of anthropogenic origin, the natural concentration of nickel in the soil is high. For that reason, all future green areas of the school yard should be stripped (cca 20 cm) and soil replaced with better quality soil, and on access and paved surfaces insulated.  | At the final stage of construction works (landscaping phase) | Cost should be around 700000 lek  | Contractor  | Site supervising engineer, MoES<br>REA Inspection |
| Toxic material management                             | All materials should be handled in line with instructions included in Material Safety Data Sheets present at the construction site. These can include, but are not limited to paint thinners, varnish, solvents, etc  | During construction period                                   | Contractor's obligation may be transferred to contractor by the agreement of municipality of Kamza / MoES | Contractor  | Site supervising engineer, MoES<br>REA Inspection |
| Degradation of important historical or cultural finds | If encountering archaeological finds during site preparation, contractor should stop works and follow the procedure to notify authorized bodies   | During earthworks  | Contractor's obligation may be transferred to contractor by the agreement of                              | Contractor  | Site supervising engineer, MoES<br>REA Inspection |

|                      |   |  |                                       |            |   |
|----------------------|---|--|---------------------------------------|------------|---|
|                      |   |  | municipality of Kamza / MoES          |            |   |
| Traffic disturbances | <p>It is important that traffic management is in accordance with local laws with appropriate measures and signaling systems (e.g., appropriate lighting, traffic safety signs, barriers and flag persons) that are seen easily or are easy to follow.</p> <p>Road speed should be clearly posted.</p> | During construction period on access roads | Part of contractor's regular practice | Contractor | Site supervising engineer, MoES<br>REA Inspection |

Table 7 Environmental Mitigation Measures for the Operation Phase

| Impact due to:   | Impact Mitigation Measure  | Place and Time of Performance | Implementation Cost                                     | Person in Charge                                | Control function performed by: |
|--|--|-------------------------------|---|---|--------------------------------|
| Waste generation (municipal waste and chemicals from laboratories) | <p>Special signs and guidance on chemical handling should be clearly displayed in chemical lab and near the sinks. Pouring of chemicals into sinks and mixing of chemicals is strictly forbidden. A special container for waste chemicals should be identified and marked clearly. Special containers for spills should be available at the lab.</p> <p>Different type of waste should be separated and stored in appropriate containers in the school. Hazardous waste is expected in small quantities and it has to be separated from solid waste.</p> <p>Waste should be collected by licensed collectors</p> <p>Records of waste disposal will be maintained as evidence of good management.</p> | During operation period       | Funds for regular maintenance should be borne by school | School maintenance<br>Natural sciences teachers | MoES, REA Inspection           |

|   |  |                                       |   |                      |                      |
|---|--|---------------------------------------|---|----------------------|----------------------|
| Hazardous material management   | All materials should be handled in line with instructions included in Material Safety Data Sheets present in laboratories.<br><br>Instructions should be clearly written and posted in the chemical labs and near the sinks. | During operation period               | Funds for regular maintenance should be borne by school | Chemical lab teacher | MoES, REA Inspection |
| Accidental fires  | School should prepare Emergency Management Plan and implement regular training and drills.   | During operation period               | Funds for regular maintenance should be borne by school | School manager       | MoES                 |
| Heating system and storage for crude oil or diesel for emergency generators | Fire protection measures should be implemented<br><br>Emergency Operation Plan should be done if fuel storage exceeds the volume of 5000 liters (crude oil) and / or 500 kg of gas.  | Cost included in operation of schools | Minor cost. Cost included in operation of schools       | School maintenance   | MoES, REA Inspection |

Table 8 Environmental Monitoring Plan

| Phase                  | Which parameter shall be monitored ? | Where shall the parameter be monitored? | How shall the parameter be monitored?/ type of monitoring equipment                          | When shall the parameter be monitored? (at what intervals or continuously) | Required Funds /Cost/   | Organization in charge of Monitoring   |
|------------------------|--------------------------------------|---|--|--|---|--|
| <i>Preconstruction</i> | Site Organization                    | On Site                                 | By checking proper fencing, security measures, installation of temporary sanitary facilities | Prior construction works commence  | Contractor bears full cost, usually it is not identified as separate category | Supervising site engineer<br><br>Municipality of Kamza<br><br>MoES<br><br>Ministry of Environment (inspection) |

|                     |   |                             |  |  |   |   |
|---------------------|---|-----------------------------|--|--|---|---|
|                     | Soil quality (heavy metals:<br>Ni, Cr, Mn, Cu, Zn, Pb,<br>As, Cd, Hg) | On site                     | Through the licensed laboratory<br>for soil testing  | At the beginning of<br>construction works or<br>just prior   | MoES will bear the<br>cost of sampling and<br>analysis                              | Supervising site engineer   |
| <i>Construction</i> | Air quality (dust)  | On the site                 | Visual observation   | Continuous, however<br>special attention should<br>be put during tracking of<br>material and excavation<br>works | Contractor bears full<br>cost, usually is not<br>identified as separate<br>category | Supervising site engineer<br><br>Municipality of Kamza<br><br>MoES<br><br>Ministry of Environment<br>(inspection) |
| <i>Construction</i> | Source of construction<br>materials (asphalt, quarry,<br>sand/gravel) | On Site                     | Checking that quarries, etc.<br>have valid operating permit<br><br>Copies should be kept on site | At the start of the<br>contract  | Contractor bears full<br>cost, usually is not<br>identified as separate<br>category | Supervising site engineer<br><br>Municipality of Kamza<br><br>MoES<br><br>Ministry of Environment<br>(inspection) |
| <i>Construction</i> | Noise   | On site and<br>neighborhood | Sound level detector   | In the first week of<br>construction and after<br>any complaint from<br>local population                         | 800 Euro /<br>measurement<br><br>Contractor should<br>bear the cost                 | Supervising site engineer<br><br>Municipality of Kamza<br><br>MoES<br><br>Ministry of Environment<br>(inspection) |

|                     |  |                      |   |   |  |  |
|---------------------|--|----------------------|---|---|--|--|
| <i>Construction</i> | Water and soil pollution due to improper spills storage, management and use of materials | On construction site | Visual observation  | Continuously (on a daily basis)   | Part of supervising engineer's contract<br><br>Contractor            | Supervising site engineer<br><br>Municipality of Kamza<br><br>MoES<br><br>Ministry of Environment (inspection) |
| <i>Construction</i> | Waste generation   | On construction site | Waste accompanying documentation that is submitted to Ministry of Environment, in which type and quantities of waste are identified | Continuous during construction, i.e. each time waste is taken from the site | Part of engineer's contract during construction<br><br>Contractor    | Supervising site engineer<br><br>Municipality of Kamza<br><br>MoES<br><br>Ministry of Environment (inspection) |
| <i>Construction</i> | Incidental finds   | On site              | Full supervision by site inspector during excavation works  | During excavation works for foundations                                     | Part of supervising engineer's and contractor cost<br><br>Contractor | Supervising site engineer<br><br>Municipality of Kamza<br><br>MoES<br><br>Ministry of Environment (inspection) |
| <i>Construction</i> | Toxic / Hazardous material   | On site              | Proper handling and storage is checked according to MSDS material sheets  | Continuously (on a monthly basis, and on random site visits)                | Part of regular contractor's cost                                    | Supervising site engineer<br><br>Municipality of Kamza<br><br>MoES<br><br>Ministry of Environment (inspection) |

|                     |  |  |  |   |                                  |  |
|---------------------|--|--|--|---|----------------------------------|--|
| <i>Construction</i> | Workers safety                                       | On site, checking weather protective gear, safety helmets, safety belts, ear protection when needed is worn, checking the fencing and warning signs. | Visual observation   | Continuously (daily) checking that appropriate protective equipment is used       | Part of regular contractor costs | Supervising site engineer<br>Municipality of Kamza<br>MoES<br>Ministry of Environment (inspection) |
| <i>Construction</i> | Hazard to public traffic and pedestrians safety      | On site and roads allowed to access the site   | Visual observation and potential complaints from the public  | Daily checking the signs, fences, accesses and traffic signalization and patterns | Part of regular contractor costs | Supervising site engineer<br>Municipality of Kamza<br>MoES<br>Ministry of Environment (inspection) |
| <i>Operation</i>    | Toxic/Hazardous material management                  | In school laboratories   | Proper handling and storage is checked according to MSDS material sheets   | Continuously, on a weekly basis   | Part of operating costs          | Laboratory teacher and Work safety Inspection, MoES  |
| <i>Operation</i>    | Waste management (municipal waste and lab chemicals) | In school and schoolyard   | Waste accompanying documentation that is submitted to Ministry of Environment in which type and quantities of waste are identified | Continuously during operation   | Part of regular operation costs  | Ministry of Environment (inspection), MoES   |

## **INSTITUTIONAL CAPACITY BUILDING**

The Ministry of Education and Science has no experience in environmental management. For that reason there will be clear division of responsibilities and duties within the Ministry and environmental consultants who will be contracted to facilitate environmental management. The MoES Secretary General is responsible for coordination and monitoring of activities in the technical level, including environmental planning and management. The environment consultant should have a strong background of EIA processes and s/he should speak Albanian and English language fluently. Directors of MoES relevant departments, mainly the Department for Budget Planning and General Directorate of Supporting Services and heads of institutes will be responsible for the implementation of activities. MoES will be responsible for hiring and overseeing the required environmental consultant, architects, engineers and contractors. In the framework of school rehabilitation, enlargements and constructions, the MoES role is to manage designing, bidding, supervision of projects (including civil works, goods and services). Specifically, the MoES responsibility includes:

- to contract the environmental consultant who will prepare environmental due diligence documents for individual sites in coordination with MoES and municipalities and during the project implementation phase s/he will supervise EMP implementation and report on it (municipality will contract its supervising engineer who will be present at the specific site in the entire construction time);
- to supervise the work performed by the environmental consultant, engineering/designing companies to ensure that they are applying the right standards and they are following the approved procedures and approved environmental plan.
- to organize tendering procedures, to review tender evaluation performed by architectural/constructing companies, and assure that contracts are signed in accordance with procedures approved.
- to ensure that the environmental consultant is providing adequate site supervision, particularly supervision of environmental management plan implementation.
- to establish a team for construction and environmental issues in Department of Budget Planning in MoES.
- to report to the Bank on progress and issues in terms of the environmental safeguards and the civil works.

The Ministry does not have a separate environmental unit. Since EEE-P implementation will have a direct impact on environment through school rehabilitation, enlargement and construction, a team in Department of Budget Planning is responsible for coordination and supervision of environmental plans and risk mitigation measures undertaken in the Project and cooperation with territorial departments for environment protection. To compensate the capacity shortage in the Ministry, an environmental consultant has been contracted by the Ministry reports directly to the team in the Department for Budget Planning, to General Directorate of Supporting Services and Secretary General in the Ministry on EMPs implementation. The World Bank has reviewed and provided the the no objection to ToR for the environmental consultant. The environmental consultant will have significant experience in EIA process and s/he should be fluent in English.

The environmental consultant has been contracted full time during is responsible for EMP preparation and supervision of their implementation, reporting to MoES and WB. He is also involved in the training. In the first report on project implementation progress a team in the Budget Planning Department, advised by environmental consultant, will propose a training program for the technical staff team in Department of Budget Planning, members of municipalities who will supervise the



works, supervising and site engineers. The team in Department of Budget Planning will work in close cooperation with General Directorate of Supporting Services that will be in charge of procurement and legal aspects of the project and Secretary General will be responsible for program coordination. With the environmental consultant's support, the team will:

- coordinate environmental training for staff, designers and local contractors;
- disseminate existing environmental management guidelines and develop guidelines related to issues which are not covered by existing regulations, on implementation, monitoring and evaluation of mitigation measures;
- ensure contracting for construction and supply of equipment includes reference to appropriate guidelines and standards;
- coordinate environmental review of subprojects;
- help organize public consultations of EIA/EMPs;
- perform periodic site visits to inspect and approve plans and monitor compliance with EMPs;
- prepare its own reports and consolidate reports received from Municipalities and site supervising engineers on EMPs implementation.

Communes and Municipalities will be responsible for supervision of construction to ensure, inter alia, full compliance with environmental guidelines included in this POM and individual EMPs.

Communes and Municipalities where new schools will be built (on existing schoolyards or new locations) will be responsible for procuring and supervising all related works. Communes and Municipalities will be responsible for:

- procurement of works related to construction of new schools financed under EEEP and site supervising engineer;
- ensuring that measures and monitoring in Environmental Assessments/ individual EMP become part of contractor's agreement, site supervising engineer; and
- supervising construction to ensure, inter alia, full compliance with environmental guidelines included in this POM and individual EMPs.

After construction finalization, "Bathore 6" School, staff will be mainly responsible for monitoring, especially teachers of natural sciences labs, who will be responsible for waste management originating from laboratories and school maintenance staff will be responsible for municipal waste management.

In addition to the of Ministry of Education and Communes/Municipalities, the Ministry of Environment can participate with its inspection unit in supervision of individual subprojects implementation.

Control of environment situation is the duty of Environmental Inspectorate, assigned by the Minister of Environment, and Regional Environmental Agencies.

The Environmental Inspectorate is expected to visit the project site from time to time and check if performed activities are in accordance with environmental legislation. The Inspectorate is authorized to close down, to suspend, to terminate partially or totally the activity of natural and legal persons,

who have caused environmental pollution or damage and defines relevant tasks on situation improvement. Duties of State bodies related to environmental control are described in Annex 1.

Implementation of EMP provisions will be regularly reported to the Bank in the semiannual progress reports. Input for reports will be provided by the site supervising engineer, consultant supervising project implementation, municipality and environmental consultant contracted by the Ministry.

Table 9 Environment responsibilities during construction and operation

| <i>Responsibilities for mitigation and monitoring</i>   | <i>Environmental information flow (reporting)</i>   | <i>Decision making chain for environmental management (to take action, to authorize expenditures, to terminate, etc.)</i> |  |
|---|---|---|--|
|   |   | <i>Activities</i>   | <i>Responsibility Institution or person</i>  |
| <b><i>During Construction:</i></b>  |   |   |  |
| Environmental Consultant and team in Department for Budget Planning in MoES<br><br>Kamza Municipality<br><br>Contractor | From Site Supervisory Engineer to MoES environmental consultant / MoES environmental consultant to Secretary General, General Directorate of Supporting Services and Department of Budget Planning<br><br>Environmental Inspectorate of Regional Environment Agency | Monitoring of EMP and EA provisions Implementation  | Site Supervisory Engineer, Environmental consultant<br><br>Environmental Inspectorate of Regional Environment Agency |
| <b><i>During Operation:</i></b>   |   |   |  |
| Team in Department for Budget Planning in MoES<br><br>Municipality<br><br>School  | School / Municipality to Secretary General in MoES  | Monitoring of EMP and EA provisions Implementation  | Appointed person from school maintenance<br><br>Environmental Inspectorate of Regional Environment Agency            |

## **PUBLIC PARTICIPATION**

Public participation for Education Excellence and Equity Project will follow World Bank procedures.

According to the World Bank policy on Environmental Assessment, for all Category B projects, during the EA process, the Borrower consults with project-affected groups and local non-governmental organizations (NGOs) about project environmental aspects and takes into account their views at least once. The Borrower initiates such consultations as early as possible. In addition, the Borrower consults such groups throughout project implementation as needed to address EA-related issues that affect them.

The proposed school project and corresponding report of environment impact assessment should be submitted to public consultation. Consultation should be organized by local the government where the project will be implemented and by proposer; the MoES can advise and support the local government on this process. The local government is expected to invite stakeholders, make the EA report publicly available before and during consultations, decide on the date for the debate and notify participants for the meeting day, time and location. The EA should be available to stakeholders three weeks before the consultation. The EIA will be posted on the website of the MoES and municipality, as well as on Municipal information board as hardcopy.

During consultations, the municipality should inform the public on the following: a) Project implementation site/location; b) Type of activity; c) If it is possible raw materials, energy, water to be used; d) Project duration; e) Waste to be generated, type and if it is possible quantity; f) Possible/expected negative impact on health and environment (water, air and soil/land discharges); and g) Measures to be taken for possible impacts reduction. The municipality should consider relevant recommendations/concerns by stakeholders and, to the extent possible, incorporate them into the final plan and EA. Minutes of this meeting should be prepared highlighting key concerns and recommendations made by stakeholders and agreements reached. The minutes of the meeting should be attached to the final document and submitted to the World Bank for final disclosure.

## **ANNEXES**

## **ANNEX 1 ROLE AND RESPONSIBILITY OF STATE BODIES RELATED TO ENVIRONMENT**

### Environmental institutional network

All specialized bodies, commissioned by law with environment protection in Republic of Albania represent the environmental institutional network of the country.

Environmental institutional network comprises Ministry of Environment, REAs, and Environmental Inspectorate, environmental bodies under the main central and local authorities, as well as inter-ministerial bodies, approved by Council of Ministers to follow important environmental issues.

Central and local government bodies, as legitimate administrators of various environmental elements, realize environment protection through implementation of this function.

### Ministry of Environment

As a specialized institution on environment protection and as a technical supporting body to Minister of Environment, Ministry of Environment performs these main duties:

- It cooperates and coordinates with central and local government institutions, with public and nonprofit organizations to increase the level of enforcement of environmental legislation.
- It prepares bilateral or multilateral draft agreements, protocols, projects and programs of cooperation with governments, international bodies and organizations for environmental protection and follows their implementation.
- It studies the country needs for specialists and coordinates qualification and specialization activities of personnel dealing with environmental protection in cooperation with Ministry of Education and Science.
- It supports projects on scientific research, improvement of environment situation, the introduction of ecologically clean technologies and promotion of nonprofit organizations activities.
- It assists local government bodies on environmental protection and preparation of local environmental action plans.

### Regional Environmental Agencies

Regional Environmental Agencies (REAs) are bodies under Ministry of Environment specialized for environmental protections which operate on prefecture level.

Implementing objectives and priorities of Ministry of Environment, REA-s:

- Implement legislation on environment protection in a local level;

- Assist local government bodies in the field of environmental protection and management within their jurisdiction; they cooperate with the local government for development of local environmental actions plans, programs and projects;
- Promote the use of clean technologies and introduction of environmental management systems;
- They are involved in the process of environmental permit and declaration approval by performing the duties defined by the Minister of Environment in a special regulation. They provide the environmental consent and authorization for local activities.
- Undertake awareness activities for environment protection and cooperate with community, public and environmental NGOs and professional business organizations.

### Environmental Inspectorate

Environmental Inspectorate functions within the Ministry of Environment, as a body specialized on environmental control. Environmental Inspectorate is composed of: Chief Inspectorate, inspectors of Ministry of Environment and inspectors of REAs. Inspectors of Ministry of Environment exercise their control activity in the entire territory of Republic of Albania, while inspectors of REAs operate within prefecture territory.

Environmental Inspectorate:

- Exercises continuous control on environment and polluting activities in order to ensure environment protection through environmental legislation application and conditions of environmental permit and declaration.
- Requests participation of local government authorities, representatives of municipalities, nonprofit environmental organizations during environment controls.
- Creates the environmental file for every activity provided with an environmental permit. Minister of Environment defines detailed rules on the format, content and administration of environmental file.
- Assists natural and legal persons to perform self-monitoring, verification and implementation integrated management systems and controls their implementation.
- Orders implementation of obligatory measures to be taken on environment improvement, mitigation of pollution and environment damage.
- Informs local authorities regularly on environment situation, approved activities, projects and installations, according to provisions of this law.
- Controls pollutants register, inner technical and technological regulations and other documents related to the activity and risks of pollution.
- Imposes sanctions, according to this law and other legal acts that protect special elements of the environment.
- Publishes results of each exercised control.

### Public media

Public media assist in:

- protection of national interests in environmental protection field;
- increase of contemporary knowledge and culture on environment;
- realization of public right to be informed on environment situation;
- diffusion of technical and scientific achievements in environmental field and national activities in this field.

### Local government authorities

Local government authorities represent the most important governmental structure for administration and protection of environment under their jurisdiction, by implementing responsibilities, rights and duties conferred to them by Law No.8652 of 31.07.2000 "On Organization and Functioning of local government". They have the following duties in environmental protection field:

- To realize implementation of environmental legislation;
- To draft local plans for environmental protection and plans for territory adjustment;
- To publish programs and measures for environment protection;
- To inform the public on environment situation and local activities that are subject to environmental impact assessment;
- To promote and support activities of non-profit organizations for the environment, by considering their opinion in the environmental decision making process;
- To define the sites for collection and processing of production and human life wastes in accordance with environmental criteria and development plans;
- To organize dumping of wastes and hazardous substances and protection of green areas in urban centers and around them;
- To administer urban wastes, waste water treatment and solid wastes plants; and
- To discipline transport and constructions in urban environment.

## ANNEX 2 POTABLE WATER ANALYSIS



**REPUBLIKA E SHQIPERISE**  
**MINISTRIA E SHENDETESISE**  
**INSTITUTI I SHENDETIT PUBLIK**  
**TIRANE**

Rruga: "Aleksander Moisiu", Nr 80, Tirane, Albania.  
Tel: +355 4374756, Fax 355 43 70058

Nr. 2454 prot.

Tirane, me 13/09/ 2011

### RAPORT- ANALIZE Nr. 33

Lloji i mostres:.....Uje nga rrjeti ujesjelles i Bovilles,  
( per Shkollen 9- vjecare ne lagjen Bathore nr. 6), Tirane  
Enti dergues:.....Ministria e Arsimit dhe e Shkences  
Drejtoria Programeve te Zhvillimit..  
Sjelle me shkrese:.....Nr. 245/1, Prot. date 02.03.2011  
Marresi i mostres:..... ISHP, Seksioni i ujit dhe Sanitetit.  
Data e pranimit per analize:.....data 28.03.2011  
Lloji i analizes:.....Analize Bakteriologjike, Fiziko-kimike, Toksikologjike,  
(metalet e renda, vajra e graso.) ( Profilaksi )

#### a) Vleresimi mikrobiologjik:

| Nr | Indeksi mikrobiologjik | Uje nga rrjeti ujesjelles i Bovilles, | Norma        |
|----|------------------------|---------------------------------------|--------------|
| 1  | Coliforme totale       | 0                                     | 0/100ml uje  |
| 2  | E. Coli                | 0                                     | 0/100 ml uje |
| 3  | Streptokoku fekal      | 0                                     | 0/100 ml uje |

#### b) Vleresimi fiziko-kimik :

| Nr | Treguesit kimike                                    | Uje nga rrjeti ujesjelles i Bovilles, | Norma   | Max. e lejueshme   |
|----|---|---------------------------------------|---------|--|
| 1  | Shija dhe era<br>(numer hollimi)                    | Normale                               | 0       | 2 balle ne 12 <sup>o</sup> C, 3 balle ne 25 <sup>o</sup> C |
| 2  | Ngjyra dhe pamja e jashteme<br>(mg/l shkalla Pt/Co) | Normale                               | 1       | 20   |
| 3  | pH<br>(njesi pH)                                    | 7,80                                  | 6.5-8.5 | 9.5  |
| 4  | Konduktiviteti elektrik<br>( $\mu$ S/cm)            | 330                                   | 400     |  |
| 5  | Kalciumi (mg/l)                                     | 45                                    | 75      | 200  |







|    |  |        |   |      |
|----|--|--------|---|------|
| 6  | Lendet pezull (mg/l)                     | 0      | nuk lejohen   |      |
| 7  | Turbullira (njesi FTU)                   | 0      | 0.4   | 4    |
| 8  | Alkaliniteti Total (mg ekv/l)            | 3,6    |   |      |
| 9  | Karbonate (mg/l)                         | 0      |   |      |
| 10 | Bikarbonate (siHCO <sub>3</sub> ) (mg/l) | 219,15 | uji nuk duhet te jete agresiv per CaCO <sub>3</sub> |      |
| 11 | Amonjaku (mg/l)                          | 0,03   | 0   | 0.05 |
| 12 | Nitrite (mg/l)                           | 0      | 0   | 0.05 |
| 13 | Nitrate (mg/l)                           | gjurme | 25  | 50   |
| 14 | Fortesia Totale (°gjermane)              | 9,12   | 10-15   | 20   |
| 15 | Fosfate (mg/l)                           | 0,30   | 0.4   | 2.5  |
| 16 | Lenda organike (mg/l)                    | 0,31   | 3   | 3    |
| 17 | Kloruret (mg/l)                          | 28,30  | 200   | 200  |
| 18 | Sulfate (mg/l)                           | 22     | 250   | 250  |
| 19 | TDS (mg/l)                               | 165    |   |      |
| 20 | Plumbi (µg/l)                            | n. d   | 0   | 50   |
| 21 | Kadmiumi (µg/l)                          | n. d   | 3   | 5    |
| 22 | Arseniku (µg/l)                          | n. d   | 10  | 50   |
| 23 | Zhiva (µg/l)                             | n. d   | 0   | 1    |
| 24 | Nikel (µg/l)                             | n. d   | 20  | 50   |
| 25 | Bakri (µg/l)                             | n. d   | 100   | 1000 |
| 26 | Zink (µg/l)                              | n. d   | 100   | 3000 |
| 27 | Krom (µg/l)                              | n. d   | 0   | 50   |
| 28 | Mangan (µg/l)                            | n. d   | 20  | 50   |
| 29 | Hekuri total (µg/l)                      | n. d   | 50  | 300  |

**Shenim:** - Ne tabele jane dhene normat e cilesise se ujit te pijshem qe perdoret per konsum njerezor.

- n. d – nuk detektohet

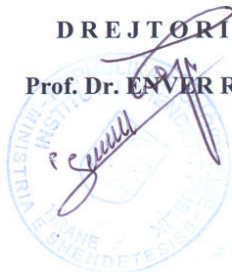
| Nr. | Parametri                      | Uje nga rrjeti ujeshelles i Bovilles, |       |  |
|-----|--------------------------------|---------------------------------------|-------|--|
|     |                                | Njesia matese                         | Norma | Max e lejueshme  |
| 1   | Vajrat minerale (mineral oils) | mg / l                                | n. d  | Asnje cipe e dukshme nuk lejohet ne siperfaqen e ujit si dhe as ere. |

**Shenim:** - Raport – Analiza vlen vetem per mostrat e sjella dhe analizuar ne laboratore.

- n. d – nuk detektohet

**DREJTORI**

Prof. Dr. ENVER ROSHI





**REPUBLIKA E SHQIPERISE**  
**MINISTRIA E SHENDETESISE**  
**INSTITUTI I SHENDETIT PUBLIK**  
**TIRANE**

Rruga: "Aleksander Moisiu", Nr 80, Tirane, Albania.  
Tel: +355 4374756, Fax 355 43 70058

Nr. 945/12 prot.

Tirane, me 20/04 2011

**RAPORT- ANALIZE Nr. 33**

Lloji i mostres:.....Uje nga rrjeti ujesjelles i Bovilles,  
( per Shkollen 9- vjecare ne lagjen Bathore nr. 6), Tirane  
Enti dergues:.....Ministria e Arsimit dhe e Shkences  
Drejtoria Programeve te Zhvillimit..  
Sjelle me shkrese:.....Nr. 245/1, Prot. date 02.03.2011  
Marresi i mostres:..... ISHP, Seksioni i ujit dhe Sanitetit.  
Data e pranimit per analize:.....data 28.03.2011  
Lloji i analizes:.....Analize toksikologjike (Pesticidet klororganike)

**Rezultatet e analizes per pesticidet klororganike**

| Nr  | KOMPONIMI   | Uje nga rrjeti ujesjelles i Bovilles, per Shkollen 9- vjecare ne lagjen Bathore nr. 6), Tirane<br>Perqendrimi ( $\mu\text{g}/\text{liter}$ ) |
|-----|---|--|
| 1.  | $\alpha$ -Heksaklorocikloheksan ( $\alpha$ -HCH)  | n.d.   |
| 2.  | Heksaklorobenzen (HCB)                            | n.d.   |
| 3.  | $\beta$ - Heksaklorocikloheksan ( $\beta$ -HCH)   | n.d.   |
| 4.  | $\gamma$ - Heksaklorocikloheksan (lindan)         | n.d.   |
| 5.  | $\delta$ - Heksaklorocikloheksan ( $\delta$ -HCH) | n.d.   |
| 6.  | Heptaklor   | n.d.   |
| 7.  | Heptakloroepoksid B                               | n.d.   |
| 8.  | Kaptan  | n.d.   |
| 9.  | O,p'-DDE  | n.d.   |
| 10. | $\alpha$ -Endosulfan                              | n.d.   |
| 11. | P,p'-DDE  | n.d.   |
| 12. | Dieldrin  | n.d.   |
| 13. | O,p'-DDD  | n.d.   |
| 14. | Endrin  | n.d.   |
| 15. | $\beta$ -Endosulfan                               | n.d.   |
| 16. | p,p'-DDD  | n.d.   |

|     |             |      |
|-----|-------------|------|
| 17. | o,p'-DDT    | n.d. |
| 18. | p,p'-DDT    | n.d. |
| 19. | Metoksiklor | n.d. |
| 20. | Mireks      | n.d. |

*Shenim: - Raport – Analiza vlen vetem per mostrat e sjella dhe analizuar ne laboratore.  
- n. d – nuk detektohet*

**DREJTORI**

**Prof. Dr. ENVER ROSHI**



## ANNEX 3 SOIL TESTS

### Evaluation Report of radioactive pollution and heavy metals in soil

#### where new 9 Year “Bathore 6” School, will be built

Upon request of Ministry of Education and Science under the project "Quality and Equity in Education" during 25-30 June 2010 survey of terrain was held and sampling of soil. Samples were taken in the area planned for construction of new 9 - year school in “Bathore 6”, Kamez. The aim of this survey and sampling was to monitor for any radioactive presence and serious pollution by metals in the surface of the area on which schools will be built.

Geographical data of the monitored area are presented in Table 1.

| Place/Location | Coordinate (latitude/longitude) | Elevation |
|----------------|---------------------------------|-----------|
| Bathore/Kamez  | N: 41°22.797<br>EO: 19° 47.179  | 74.4 m    |

In the entire area, samples were collected in three soil surfaces (see fig. 1) with the size 35 x 35 cm, so as to cover better the monitored area.

After subjecting to the process of drying, cleaning, the roots of plants and grinding and homogenization, samples in question were prepared according to stipulated procedures for further tests in laboratory.

#### *1. Sensory (olfactory) inspection of samples*

- 1.1 All samples were taken in the area with normal vegetation. They are of gray light soil that does not contain grit.
- 1.2 Samples have low moisture, they crumble without difficulties and they do not appear to contain oil.
- 1.3 There is no doubt about samples having the characteristic of odor of PCB contamination, etc..

As a conclusion, we state that sensory inspection noted no signs of any possible pollution.

#### *2. Evaluation of Radio-Activity*

## 2.1 Assessment of Environmental Gamma radiation dose

Survey of terrain was conducted measuring the dose of gamma radiation environment, which resulted in values 0.031-0.043  $\mu\text{Sv/h}$

## 2.2 Measuring of spectrometric gamma

After keeping closed for a three week period sufficient to achieve the balance among radioactive families, samples were tested in spectroscopic range measurement system.

Average values of results of gamma spectrometric test of the above-mentioned samples are shown in the table below.

| Place of sampling | No. of sample | Activity $^{238}\text{U}$<br>(Bq/kg) | Activity $^{232}\text{Th}$<br>(Bq/kg) | Activity $^{40}\text{K}$<br>(Bq/kg) | Activity $^{137}\text{Cs}$<br>(Bq/kg) |
|-------------------|---------------|--------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|
| Bathore/Kamez     | 3             | 2.1 $\pm$ 0.58                       | 7.7 $\pm$ 0.64                        | 333.4 $\pm$ 20.40                   | 5.0 $\pm$ 0.71                        |

Table 2. Gama-spektrometrik results of the samples

Average value of radio-nuclide activities measured in samples. Errors reported in the table above correspond to value of a Sigma ( $k = 1$ ).

Gamma-spectrometric measurements showed the presence of natural radio-nuclide as  $^{238}\text{U}$ ,  $^{232}\text{Th}$ ,  $^{40}\text{K}$  and byproducts of  $^{238}\text{U}$  and  $^{232}\text{Th}$  elements with half time and relatively long degradation that is characteristic and consistency of chemical composition of studied samples and that is the same. The main contribution of time and natural soil font. The presence of  $^{137}\text{CS}$  was also noted, explained by the fact that the sample area was undeveloped area and samples were taken at a superficial level.

### *Assessment of contamination with heavy metals*

Following appropriate processing samples underwent tests to determine the heavy metal content. Tests were performed with the method of X-ray fluorescence and atomic absorption it.

Search the content of heavy metals along with those of several key elements presented in table 3.

Relative standard deviation concentrations of values for heavy metals is 10-15%, and <5% for major elements.

Table 3. Results of the heavy metal content (mg / kg)

|               | Sample 1 | Sample 2 | Sample 3 |
|---------------|----------|----------|----------|
| <b>Cr</b>     | 350      | 301      | 192      |
| <b>Mn</b>     | 861      | 716      | 661      |
| <b>Ni</b>     | 262      | 178      | 163      |
| <b>Cu</b>     | 47       | 412      | 254      |
| <b>Zn</b>     | 86       | 405      | 209      |
| <b>Pb</b>     | 25       | 47       | 23       |
| <b>As</b>     | < 10     | < 10     | < 10     |
| <b>Cd</b>     | < 0.3    | < 0.3    | < 0.3    |
| <b>Hg</b>     | < 0.1    | < 0.1    | < 0.1    |
| <b>K (%)</b>  | 1.98     | 1.83     | 1.91     |
| <b>Ca (%)</b> | 3.86     | 3.68     | 3.60     |
| <b>Ti (%)</b> | 0.43     | 0.41     | 0.46     |
| <b>Fe 1%</b>  | 4.73     | 5.00     | 4.93     |

These results do not attest any contamination of soil in monitored area, but reflect the natural characteristics of soil in that area.

### **Conclusions:**

Based on values of different parameters that were measured during the monitoring in the area where the school will be built, no anthropogenic pollution is found. Sensory inspection shows no signs of any possible pollution with organic nature.

Concentrations of heavy metals are generally within allowed rates and, in each case they reflect natural characteristics of soil in that area.

Parameters of radio-activity, gamma dose environment, and natural and artificial activities of radio-isotope, have normal levels that correspond to natural land fund, with no risk of causing problems in radio-ecological environment and population health

Dr. Durim Kryeziu

Prof. Assoc. Nikolla CIVICI



**ANNEX 4 AIR QUALITY**



**REPUBLIKA E SHQIPERISE  
MINISTRIA E SHENDETESISE  
INSTITUTI I SHENDETIT PUBLIK**

*Rruga: "Aleksander Moisiu", Nr 80, Tirana, Albania.*

*Tel: +355 42374756, Fax 355 423 70058*

Nr. 245/B prot

Tirane me 14 04. 2011

**Lenda:** Ekspertize e cilesise se ajrit kryer ne mjedisin e vendit ku do ngrihet shkolla e re prane Bathore 6, Kamez

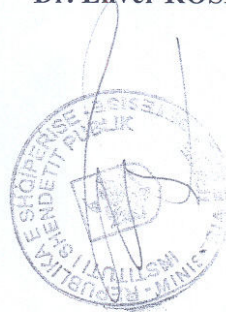
**Drejtuar:** Drejtorise Arsimore  
Kamez - Tirane

Ministrise Arsimit  
Tirane

Ne pergjigje te kerkeses suaj, bashkengjitur gjendet relacioni i ekspertizes teknike per cilesine e ajrit kryer prej nesh ne dt. 27.03.2011 ne mjedisin e siper permendur.

**Drejtor**

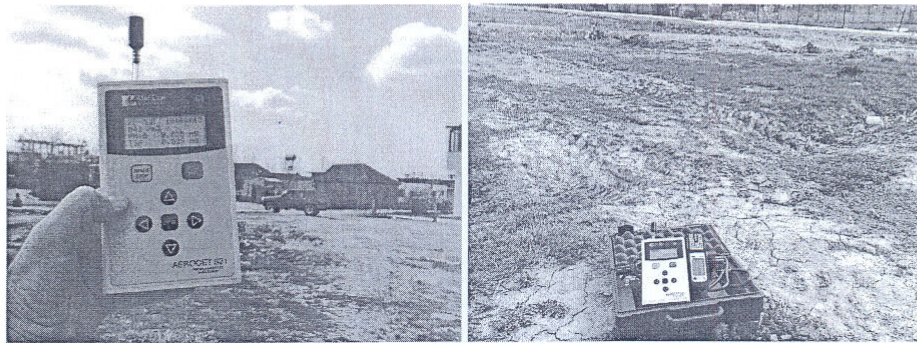
**Dr. Enver ROSHI**



Tirane, 13.04.2011

## Raport per ekspertizen e cilesise se ajrit mjedisor prane Bathore 6, Kamez

Me dt 27.03.2011 Laboratori i Monitorimit te Cilesise se Ajrit prane institutit tone ka kryer ekspertize teknike ne mjedisin prane Bathore 6, Kamez, ne vendin ku do ngrihet shkolla e re (fot.1,2).



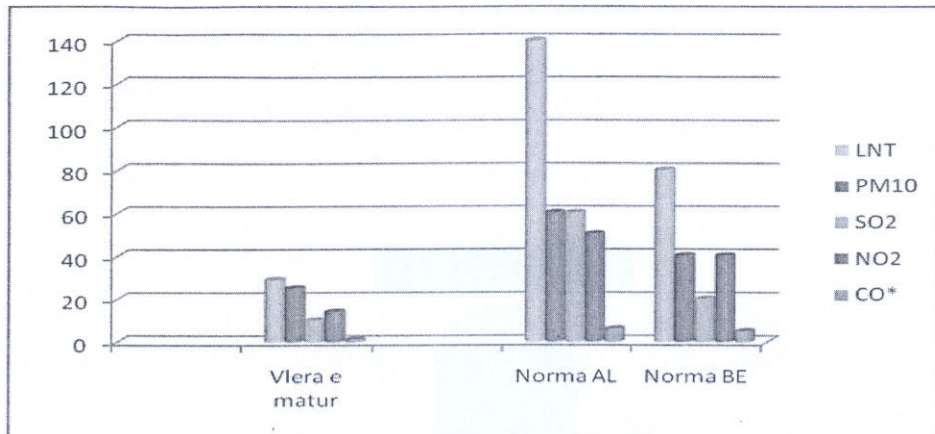
Gjate matjeve te cilesise se ajrit jemi shoqeruar nga personeli perkates i Bashkise se Kamzes.

### Rezultatet e matjeve

Matjet e indekseve kryesore te cilesise se ajrit me dt. 27.03.2010, ora 11.30 – 13.30 am, u kryen sipas metodikave standarde te perdorura prej ISHP Tirane. Rezultatet e matjeve jepen ne tab. 3:

Tab. 3

|                          | Vlera<br>e<br>matur | Norma<br>AL | Norma<br>BE |
|--------------------------|---------------------|-------------|-------------|
| $\mu\text{g}/\text{m}^3$ |                     |             |             |
| LNT                      | 29                  | 140         | 80          |
| PM10                     | 25                  | 60          | 40          |
| SO <sub>2</sub>          | 10                  | 60          | 20          |
| NO <sub>2</sub>          | 14                  | 50          | 40          |
| CO*                      | 1.1                 | 6           | 5           |
| *mg/m <sup>3</sup>       |                     |             |             |



**Perfundime**

Matjet e kryera per indeksat kryesore te cilesise se ajrit mjedisor ne vendin e caktuar per ndertimin e shkolles se re prane Bathore 6, Kamez, rezultojne te gjitha brenda normave te lejuara te Shqiperise e te vendeve te BE.

Kimist Toksikolog,

Agron Deliu

**REPUBLIKA E SHQIPËRISË**  
**MINISTRIA E ARSIMIT DHE SHKENCËS**

Rruga: "Durrësit", Nr. 23, AL-1001, Tiranë - SHQIPËRI [www.mash.gov.al](http://www.mash.gov.al) Tel: 00 355 4 xxx

**Titulli i Shkurtuar i DOKUMENTIT:** ..... Dërgim procesverboi .....

**Nr. i Prot të shkresës shoqëruese:** 343

**Inst./Personi dërgues:** Bashkia Komit.

**Data e hyrjes:** 09.09.11

**Shkalla e prioritetit:**  normal;  prioritar;  brenda ditës/urgjent

**Dërguar në Kabinetin e Ministrit më:** \_\_\_\_\_

**I dërgohet për shqyrtim/përgatitje:** \_\_\_\_\_

| Data<br>(dd.mm.vv) | Drejtoria / Sektori /<br>Personi që ngarkohet | Shënime sçaruese    | Afati i<br>përfundimit<br>(ditë pune) | Nënshkrimi<br>(Mbiemri, Firma) |
|--------------------|---|---------------------|---------------------------------------|--------------------------------|
| <u>9.9</u>         | <u>J. Bona</u>                                | <u>Faqe 1/1</u>     |                                       |                                |
| <u>12.9.11</u>     | <u>J. Hajri</u>                               | <u>Për shqyrtim</u> |                                       |                                |
|                    | <u>J. Hajri</u>                               |                     |                                       |                                |
|                    |   |                     |                                       |                                |
|                    |   |                     |                                       |                                |
|                    |   |                     |                                       |                                |

**Data e daljes nga MASH dhe Nr. Prot:** \_\_\_\_\_

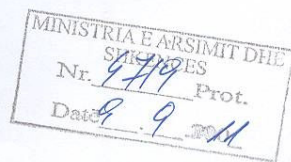
**Institucionet / Personit që i është dërguar:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



REPUBLIKA E SHQIPËRISË  
BASHKIA KAMËZ



Nr. 343 prot.

Kamëz, më 9/09/2011

**Lenda:** Dërgohet proces-verbali i konsultimit publik me Komunitetin për studimin mjedisor në zonën Bathore 6, ku do të ndërtohet objekti "Shkolla 9 Vjeçare Bathore 6" Kamëz.

**Drejtuar:** Ministrise se Arsimit dhe Shkences

**TIRANE.**

Në kuadër të projektit "Cilësi dhe Barazi në Arsim", bashkangjitur po ju dergojmë proces-verbalin e konsultimit publik me komunitetin për studimin mjedisor në zonën Bathore 6, ku do të ndërtohet objekti "Shkolla 9 Vjeçare Bathore 6" Kamëz, në variantin shqip dhe anglisht si dhe listën e përfaqësuesve të komunitetit.

Duke besuar në bashkëpunimin tuaj!

Xhetal MIZIU  
KRYETAR  
BASHKIA KAMËZ



REPUBLIKA E SHQIPËRISË  
BASHKIA KAMËZ

Kamëz më 22.08.2011

PROCES-VERBAL

MBI

KONSULTIMIN PUBLIK ME KOMUNITETIN PËR STUDIMIN MJEDISOR NË  
ZONËN BATHORE 6, KU DO TË NDËRTOHET OBJEKTI "SHKOLLA 9 VJEÇARE  
BATHORE 6" KAMËZ.

Proces-verbali mbahet sot me datë 22.08.2011 ora 12.00 në Bashkinë Kamëz, Kati i III-të, Salla e Këshillit Bashkiak, në prani të përfaqësuesve të Bashkisë Kamëz, të përfaqësuesve të komunitetit të kësaj zone, në lidhje me vlerësimin e ndikimit mjedisor për objektin Shkolla 9 vjeçare që do të ndërtohet në këtë zonë.

Studimi mbi vlerësimin e ndikimit në mjedis i projektit është bërë i njohur për komunitetin që me datën 1 Gusht, si dhe është bërë publikimi në faqen zyrtare elektronike të institucionit Bashkia Kamëz.

Nga ana e përfaqësuesit të bashkisë Z. Atli Hoti u bë prezantimi i VNM-së, duke filluar me përshkrimin e sheshit ku do të ndërtohet shkolla, planvendosjen e shkollës, planimetrinë e përgjithshme të saj, të dhëna kryesore të shkollës në lidhje me hapsirat, mjediset e planifikuara brenda shkollës dhe jashtë saj, madhësinë e llojeve individuale të mjediseve, komunikimin ndërmjet mjediseve, rrugëve, daljeve të emergjencës, aksesin e njetëzve me aftësi të kufizuar, veçoritë elektrike dhe të ndriçimit, kërkesat e sigurisë, telefonisë dhe internetit, izolimin termik, ngrohjen dhe peisazhin e jashtëm, gjithashtu komunitetit iu bë e ditur kohzgjatja e projektit që do të jetë 7 muaj për ndërtimin e shkollës, u theksua se pas përfundimit të projektit sheshi i ndërtimit do të pastrohet dhe të gjithë hedhurinat dhe materialet e mbetjeve do të eliminohen në përputhje me klauzolat e specifikuar në preventiv. Pra komuniteti u njoh në menyrë të hollësishme me masat që do të merren gjatë fazës së ndërtimit dhe masat zbutëse përkatëse në lidhje me ndotjen e ajrit, prodhimin e mbetjeve, zhurmat, ndotja e dheut dhe ujit, etj.

Në ndryshim nga koha kur është përpiluar raporti, tashmë rruga “Erzeni” është asfaltuar dhe ka përfunduar ndërtimi i trotuareve.

Pas prezantimit të VNM-së, u kalua në pyetjet direkte nga ana e të pranishmëve. Ndër pyetjet më kryesore ishin:

- i. Kur pritet të fillojë implementimi i projektit?
- ii. A ekziston mundësia e punësimit të banorëve të kësaj zone gjatë implementimit të projektit, etj?

Më pas u vijua me pyetje të karakterit të përgjithshëm.


Përfundime. Takimi me pjesëtarët e komunitetit mund të konsiderohet pozitiv dhe ndërtimi i shkollës mirëpritet nga komuniteti për aspektin social, duke afruar arsimimin e fëmijëve në afërsi të vend-banimit. U vlerësua gjithashtu fakti që ndikimet e mundshme në mjedis priten të jenë të administrueshme, të përkohshme dhe me ndikim lokal, meqënëse janë të lidhura me veprimtaritë e përgjithshme ndërtimore mbi një vendndodhje që njihet tashmë.

Përfaqësuesve të Komunitetit iu bë e ditur gjithashtu se Bashkia në bashkëpunim me Ministrinë e Arsimit dhe Shkencës do të jenë në kontroll të vazhdueshëm të zbatimit të projektit dhe të VNM-së, për të siguruar një proces sa më të saktë dhe korrekt në zbatimin e këtij projekti të rëndësishëm për komunitetin.

Bashkangjitur lista me emrat dhe nënshkrimet e të pranishmëve.

**Aprovoi**

Drejtori Juridik  
Atli Hoti



Xhelal MZIU  
KRYETAR



Sauli Raga  
Micael Princef  
Emal Roslini  
Imer Neza

Hoke Lela  
Sobajete Suloj

Din Suloj  
Dain Dauti

Audyl Bordoli

Imou Ceka

Imerli Lushi

Fehjan Micael Princef

Rustem Micael Princef

Lulezin Micael Princef

Arli'nd Micael Princef

Sikelgpa Micael Princef

Raimonda Saja

Shis Dauti

Stabil Abreu

Mgshin Gulejman

Shpetion Gulejman





REPUBLIC OF ALBANIA  
KAMZA MUNICIPALITY

*Kamëz 22.08.2011*

VERBAL – PROCESS

ABOUT

**PUBLIC CONSULTATION WITH THE COMMUNITY FOR THE ENVIRONMENTAL  
STUDY IN BATHORE 6 SECTION, KAMEZ, WHERE WILL BE CONSTRUCTED  
“ELEMENTARY SCHOOL OF BATHORE 6, KAMEZ”**

This Verbal Process is written today, in 22.08.2011 at 12.00 o'clock; at Kamza Municipality where present are representatives from Kamza Municipality, representatives from the community of this section to evaluate the environmental impact for the Elementary School that will be constructed in this area.

Study on environmental impact assessment of the project is made known to the community since on 1 August, and has been published on the official website of Kamza Municipality.

Representative of the Municipality, Mr. Atli Hoti represented the EIA, starting with a description of the site where the school will be built, plans of the school, its general layout, the school's main data concerning the premises, facilities planned within and outside school, the size of individual types of environments, communication between facilities, roads, emergency exits, accessibility for people with disabilities, electrical and lighting features, security requirements, and Internet telephony, thermal insulation, heating and external landscape, community was informed of the project duration will be 7 months to build the school, noted that after the project construction site will be cleaned and all debris and waste materials will be eliminated in accordance with clauses specified in prevention. So the community got to know in detail the measures to be taken during the construction phase and appropriate mitigation measures related to air pollution, waste generation, noise, soil and water pollution, etc.

Unlike the time when the report is compiled, now, "Erzeni" street is asphalted and the sidewalks are rehabilitated.

After the representation of the EIA, there were asked different questions and some of them were:

- i. When will the project start its implementation?
- ii. Is there a possibility of employment for residents of the area during project implementation, etc.?

Then there were followed with questions of a general nature.

Conclusions. Meeting with members of the community can be considered positive and welcomed by the construction of the school community for the social aspect, bringing the education of children in the vicinity of the site-occupancy. Also appreciated was the fact that the potential environmental impacts are expected to be manageable, temporary and local impact, as these are associated with general construction activities on a site already known.

Community representatives also was informed that the Municipality in cooperation with the Ministry of Education and Science will be in constant control of the project and the EIA process to ensure a more accurate and correct implementation of this important project for the community.

Attached is the list of names and signatures of those that were present.

**Approved**

Judicial Director

Atli Hoti



**Xhelal MZIU**

**MAYOR**



