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**Republika Kosova - Republic of Kosovo**
***Qeveria –Vlada – Government***

***Ministria e Arsimit, Shkencës dhe Teknologjisë***
***Ministarstvo Obrazovanja, Nauke i Tehnologije***
***Ministry of Education, Science and Technology***

# GUIDE

## FOR SPACE NORMS AND STANDARDS FOR PRESCHOOL FACILITIES

Pristina, 2018

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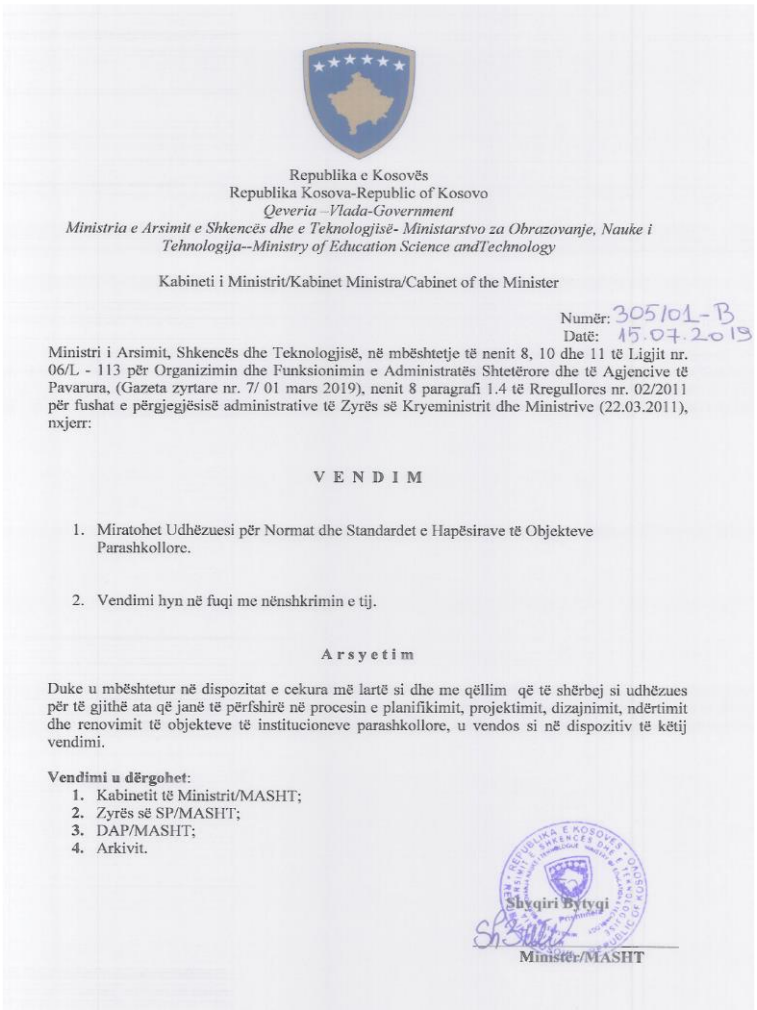

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Kabineti i Ministrit/Kabinet Ministra/Cabinet of the Minister

Numër: 305/01-B
Datë: 15.07.2019

Ministri i Arsimit, Shkencës dhe Teknologjisë, në mbështetje të nenit 8, 10 dhe 11 të Ligjit nr. 06/L - 113 për Organizimin dhe Funksionimin e Administratës Shtetërore dhe të Agjencive të Pavarura, (Gazeta zyrtare nr. 7/ 01 mars 2019), nenit 8 paragrafi 1.4 të Rregullores nr. 02/2011 për fushat e përgjegjësisë administrative të Zyrës së Kryeministrit dhe Ministrive (22.03.2011), nxjerr:

**V E N D I M**

1. Miratohet Udhëzuesi për Normat dhe Standardet e Hapësirave të Objekteve Parashkollore.

2. Vendimi hyn në fuqi me nënshkrimin e tij.

**A r s y e t i m**

Duke u mbështetur në dispozitat e cekura më lartë si dhe me qëllim që të shërbej si udhëzues për të gjithë ata që janë të përfshirë në procesin e planifikimit, projektimit, dizajnimit, ndërtimit dhe renovimit të objekteve të institucioneve parashkollore, u vendos si në dispozitiv të këtij vendimi.

**Vendimi u dërgohet:**
1. Kabinetit të Ministrit/MASHT;
2. Zyrës së SP/MASHT;
3. DAP/MASHT;
4. Arkivit.

Shyqiri Bytyqi
Minister/MASHT

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## 1.0 INTRODUCTION

Drafting norms and standards for preschool facilities refers to the physical spaces of preschool institutions (nurseries - kindergartens), always including social and pedagogical aspects. The classroom environment should provide different experiences to the children through which they will be assisted in their social, physical and emotional development, in accordance with the age and level of development. Martin et al. (1999: 78) states that "the physical environment of the classroom has double influence, on teacher behavior and on students behavior. Having in possession the adequate environment of the classroom and taking control of classroom space, teacher fills needs for being able to respond any demands or challenges he faces."

The shift from traditional to contemporary life of Kosovo society has led to different needs of adaptation and advancement with the trends of time and at the same time to increase the requirements for better quality of preschool education. Requirements for having educational institutions and especially preschool education conform international norms and standards is a requirement of time. How much Kosovo has achieved to meet with the norms and standards for preschool education, the factual situation provides an answer and at the same time helps in drafting norms and standards for preschool education. Kosovo has 1649 rural and urban settlements, of which 38 urban settlements, while others are rural areas. About 60% of the general population lives in rural settlements and a considerable part of the population faces lack of preschool education, while most of them with lack of kindergarten for children care and education. But, how much Kosovo achieved to extend preschool education in line with accepted norms and standards throughout the country, especially in rural areas, this issue is of course a very challenging for the country's institutions, having in consideration lack of budget on one side and lack of human capacities on the other side and other factors as well. In addition, the lack of kindergartens is present not only in rural areas, but also in urban areas, where some of them like in Malisheva and Shtime were established during in recent years.

There are 300,000 households in Kosovo where the number of children in kindergartens and preschools institutions in 2015/2016 was 27,508 (KAS, 2016). Requirements for nursery and preschool kindergartens is high, especially in urban centers, therefore most of these institutions (public and private) overcome their capacities to accommodate more children in nursery-kindergartens and thus does not meet international norms and standards: m2 per child, number of educators per child, accompanying spaces, etc. Failure to meet norms and standards becomes even more delicate for these institutions which in one or another way have taken up residential objects and turned them to nursery–preschool kindergartens, that not all of them meet minimum norms and standards.

To meet social, pedagogical and architectural needs of the institution is necessary, so this research/project aims to familiarize with the existing situation, providing a regulatory framework for international norms and standards that kindergartens must meet in Kosovo and so on, by the implementation of this guide to be enable quality improvement in the fields of preschool education–kindergarten-nursery.

### 1.1 Purpose and process of the research

The aim of this research/project is to scan current situation of the physical, social and pedagogical spaces of kindergartens in Kosovo. How well the physical spaces are adapted with the international norms and standards, how well are met with the needs for children and educators and what are the challenges the preschool institutions(nursery–kindergarten) face. After getting familiar with the existing situation, to be continued with drafting norms and standards that must be fulfilled by nursery-kindergartens in Kosovo.

The process of the research/project is divided into three phases: The first phase is about collecting data, analyzing and designing the questionnaire that was conducted in kindergartens/preschool institutions; The second phase includes fieldwork, therefore, field research of the existing situation and systematizing the data into SPSS20 database; and third phase includes factual situation analysis and reporting from the field.

In order to understand the situation on the ground, the research was conducted with three target groups: the first target group is leaders of the institutions, the second target group are educators and third target group are parents of the children which receive care/education into these institutions. 150 surveys were conducted with 20 public and private institutions (50% to 50%) in 10 municipalities. The sample was semi-planned.

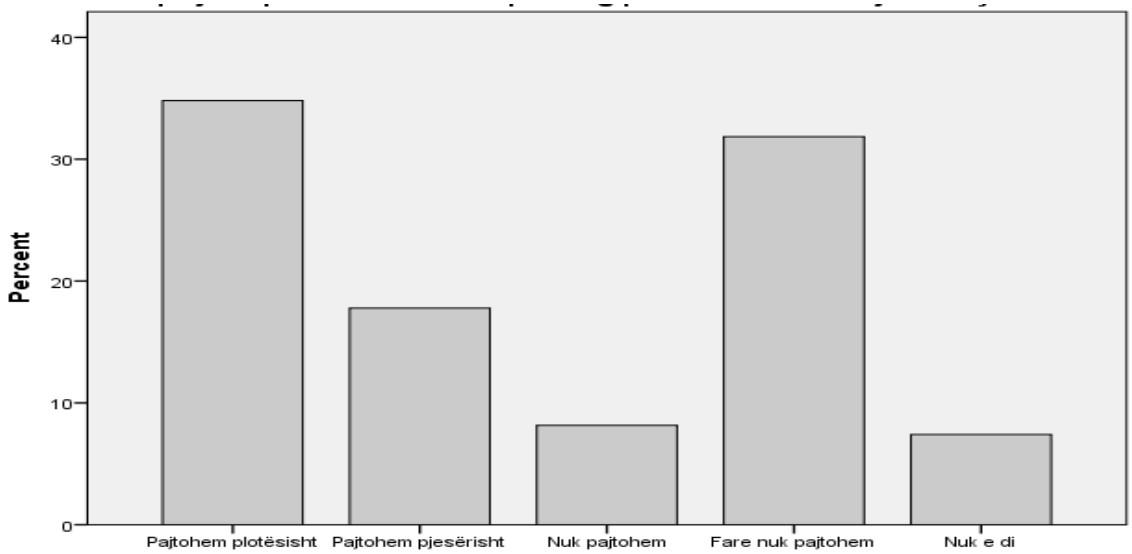
## 2.0 EXISTING SITUATION

### 2.1 Educational physical spaces

Just as adults, also children seek an appropriate environment to meet their needs, to be alone or in society, in commitment, at rest and where they feel safe and valued as a contributing member of a community (Erlehta, et al., 2012).

The results of the research show that number of the educators in relation to children in kindergarten/preschool institutions in Kosovo is satisfactory (1 educator for 12 children). This number varies from public to private institutions, but also varies by age-group of children and their space (municipality). Most of the institutions accept children from the age of 6 months. The usable interior space of the premises is 7.2 m2 per child. On the other hand, the survey reveals that only 48% of the institutions have special parking area for the needs of staff, only 34.8% of all interviewed institutions have suitable access to the parking of people with special needs (see chart), 37% fully agree that children, administrative and economic entrances to the institution are separated.

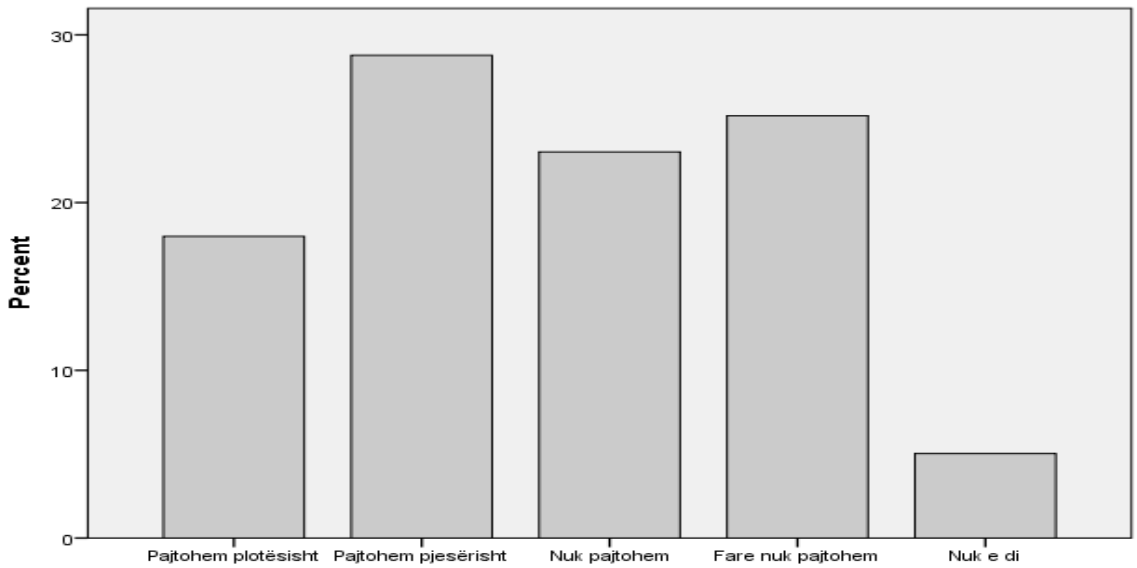
**Chart 1: Does your institution have appropriate access to parking area for people with special needs?**




Flooring is a particular importance of these institutions. About two thirds (61.8%) fully agree that their institution's flooring is appropriate for this area of activity, but this situation differs markedly between public and private institutions. Private institutions have a more inadequate situation regarding the suitability of flooring. About half (47.4%) of the interviewed fully agree and about one third (31.4%) partially agree that their institution needs a green area. Regarding the security system in the institution (for instance, alarm system, video cameras and interphone for the main doors), 41.7% are completely satisfied, 33.8% are partially satisfied and others. Accomplishment of the standards by age-group for bathrooms and toilets (quality, height of door handles, furnitures, toilets, etc.) by age-group, 49.7% fully agree that they meet the requirements, while 28.8% partially agree. Very important and sensitive issue is the issue of spaces, where food is prepared and served. Just over half of the interviewed (51%) fully agree that the place where food is prepared and served is appropriate, 36% are partially satisfied and others. Therefore, this issue obviously needs more institutional attention. Also, about half of the interviewed fully and partially agree that when preparing food, the smell also comes in the living, sleeping and other areas. Regarding the fulfillment of the wardrobe needs for children by age-group, 59% fully agree that this issue meets their requirements, 23% partially agree and others. A significant problem is observed especially at the necessary milk supply for children, where only 39.7% of them fully agree that this issue is regulated and others. Regarding the flooring material in the institution (in the living room, bedroom, kitchen, etc.), about two-thirds fully agree that the material is suitable. While, regarding to the suitability of internal and external stairs of the institution, 51.8% fully agree that they are

appropriate, 24.1% partially agree and others. While, about two thirds of the interviewed fully agree that the walls in their institution are painted conform to the standards. Regarding sufficient lighting in the institution, 71% state that they have sufficient lighting in their institution and 69% fully agree that there is sufficient ventilation in their institution. Also, noise is an another element. About half of the interviewed (24.6%) fully agree and (34.1%) partially agree that noise is present within the institution and it comes as result of external factors (traffic etc.)

**Chart 2**: **Does noise is present in your institution?**



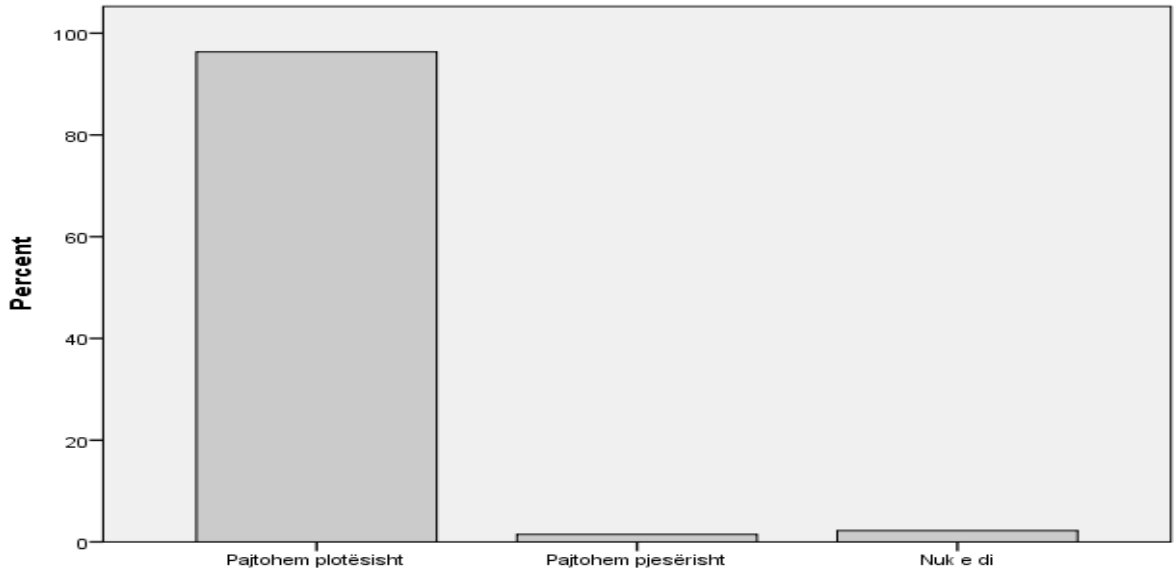

Regarding to the premises where internal staff meetings, meetings between staff and parents and in special cases with children separately are held, about half of the interviewed fully agree that the premises are appropriate.

In general, the situation of physical spaces in kindergartens is at average level, but there are some delicate issues mentioned above that require special attention from the institutions themselves, but also from other supervisory institutions.

## 2.2 Socio-pedagogical aspects

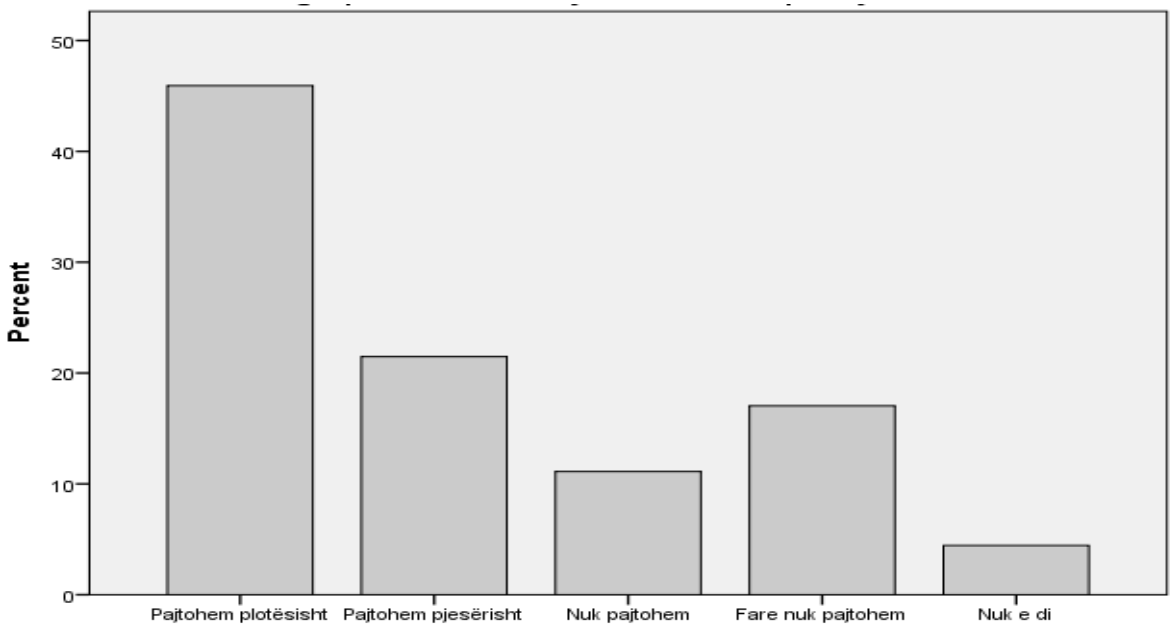
The kindergarten environment should be characterized by good organizational structure, positive working climate and didactic materials. And all these to be achieved, educational programs and an appropriate physical environment are required. But, what is the situation in this field with PI ?! Based on the research findings, 96% of the institutions state that they have educational program plans, and in drafting of these plans are also involved field experts and parents of children.

**Chart 3**: **Do you have children care and education plan / program?**




One advantage that has been noted with these institutions (76% completely agree) is the exercise of the activities initiated by the children themselves and (93%) fully agree that they encourage children to think, justify, to experiment, ask questions, 87% fully agree that there are events for children in groups in that way they can gain a wider perspective by sharing knowledge, ideas and opinions and give responsibility to the children to work together, to share material-toys and to solve problems between them, (93% completely agree). Another important element is the involvement of the parent in activities within the classroom and in this aspect is understood that 62% fully agree that even parents are involved in some cases in this aspect. Also, from the research findings we understand that 86% fully agree that they allow children to assist, arrange and maintain the room. One issue that has not received much attention in Kosovo society, is the issue of visits of the educators in the family of children and from the research findings we found that only 17.5% fully agree that they do visit, while most do not carry out such thing. Whereas, the majority (73%) of the interviewed fully agree that they write child progress reports, so they continuosly follow up child development. Whereas regarding the possibilities to use the toy corner inside or outside (garden yard) of toy corner, 72% fully agree that they have these opportunities, while the rest partially agree. These activities certainly help the child in psycho-social, physical etc. so they are very necessary. About half (45%) of the interviewed fully agree that children's groups for only one educator are large.

**Chart 4**: **Think of, how children's groups for only one educator are large?**




Just over half (52%) are fully satisfied with the psychological, social and health services their institution provides. Concerning educational facilities for child physical safety (furniture etc.) 62.4% fully agree that these are at the right level. This research also reveals that most of the institutions throughout the all seasons bring out children once a day for refreshments, games and leisure activities.

## 3.0 Objectives of the guide

Purpose of this document is to serve as a reference for designers of preschool facilities. The document clearly defines and describes the necessary educational facilities by type, children's play areas, size and other specifications in accordance with MEST standards and stipulated requirements for preschool facilities in Kosovo's urban and rural areas and international standards. The guidelines include information about all types of preschools spaces: learning spaces, such as common rooms, multipurpose spaces, accompanying spaces, administrative spaces, economic spaces and outdoor spaces for activities such as playing areas, access and parking. These guidelines can be used for a variety purposes and to varying levels, including:

- Designing of new preschool facilities;
- Design widening of existing preschool facilities;
- Evaluation and improvement of existing preschool spaces (locations) and facilities;
- The study of furnishings and preschool supplies, as their supply as well;

- Based reference for studies about using and efficiency of the buildings.

In addition, this guide gives recommendations on the design of children and accompanying living spaces in preschools buildings, having in consideration the need for practicality, adaptability and flexibility, cost-effectiveness, and thus provides a substantial contribution for the good design of preschools buildings.

## 3.1How to be used this guide?

The preparation of the norms, specifications and instructions of this guide is based on the following data: existing instructions for preschool facilities in Kosovo, which are already being used as reference documents by planners, designers and working areas supervisors; relevant law (MEST); ISO norms for construction; other Kosovo laws, including the Law on Environmental Protection, the Law on Spatial Planning and the Regulations on Fire Protection; The law of construction; Guidance on the technical conditions of construction facilities for access of persons with special needs; Technical Regulations for thermal energy saving and thermal protection in buildings; New curriculum for general education; Various standard projects for the construction of preschool facilities in Kosovo and other instructions.

The standards and instructions presented in this guide should not be regarded as mandatory rules, but rather as recommendations that can be modified to suit specific conditions, such as the dimensions of the spaces and the topography or possibilities of extending preschool facilities.

Also, the sketches and drawings of typical spaces included in this guide are not intended to limit designers from providing alternatives and other solutions to shapes (dimensions and surface) and adjustments to these spaces within the same requirements.

## 4.0 STANDARDS IN OTHER COUNTRIES

Having in consideration involvement of different professional and administrative groups at different stages of children development throughout Europe, it is not surprising that the standards of these institutions have been unevenly developed and often inconsistent. In some cases we are dealing with conditions stipulated by the law that is subject of monitoring and supervision, and in some cases they are given in the form of recommendations. The 1995 report entitled "Attributes and Quality in Children's Education Institutions", published by the European Commission for Education, noted a wide range of changes in the spatial standards of European Union countries. Some makes clarification on how pedagogical goals should determine how children will stay with the environment, etc. The report commented that sometimes too much emphasis was given to the size of sanitary spaces and joints, while 'space / free place' was the most needed space for exploring children's indoor and outdoor environments.

For example, certain quality norms have been proposed, which should be available; at least 6 m² / children in kindergarten under three years old and at least 4 m² / children aged three to six years (not including storerooms, hallways and passages); and in those areas there should be a direct access to the yard, that again should have at least 6 m² / children of outer space. Did things improve twenty years later? “Children in Europe” carries out some researches in the European Union and Norway to find out which spatial standards are mandatory or recommended (see the following scoreboard).

Only Italy partially meets the national minimum standards for interior space as proposed in 1995 as a referring point. Hungary, Norway and the United Kingdom give recommendations that go beyond the proposed standards related outdoor space, but many countries do not set specific requirements nor give recommendations on how much space (m2) a child needs. In Denmark, this is related to the decentralization of local government. In England, Scotland and Wales, a similar approach is used, according to which there are currently no rules that would set the minimum size of outer space. The United Kingdom, England having the highest level of profitability of preschools also has one of the lowest spatial requirements for early education and education of children aged 2 to 3 years, where this requirement is 3 m² / child.

The European Union with the 28[1] state members offers great opportunity for new comparative research into planning the structure of preschools and organizing their outdoor and indoor space[2].

| Country/region | Interior space (for children) | Outer space (for children) |
|---|---|---|
| **Standards proposed by the European Commission for nursery kindergarten 1995** | **0-2 age, minimum 6m²/children Over 3 years of age, minimum 4m²/children (except warehouses, communication), extra 5m² for each adult worker** | **Minimum 6m²/children;** |
| **BELGIUM – Flamengo part** | 0-3 age; 5m²/children;<br>3-12 age; 4m²/children; | No recommendations; |
| **BELGIUM – Francophone part** | 0-3 age; 2m²/sleeping baby (maximum 6 children);<br>Staying, activity 3.5-4m²/children; | 0-3 age – there aren't ;<br>75m² for nursery with 24 persons;<br>50m² for nursery with 48 of persons; |
| **DENMARK** | 0-3 age; 3m²/children;<br>3-6 age; 2m²/children;<br>Additional regulation minimum 12m3 /adult and 8m3 where is ventilation; | There aren't;<br>Earlier 10²/children; |
| **FRANCE** | Staying activity; 3-4m²/children;<br>Sleeping; 1.5-2m²/children;<br>Smaller activities 1.5-2m²/children;<br>Space for parents: 10-15% of the total area;<br>Space for the staff: 8-12% of the total area; | No recommendations; |
| **HUNGARY** | 0-3 age; 4 m²/children;<br>3-7 age; minimum 2m²/children; | 10 m²/children; |
| **ITALY** | 3-5 age; 6.67 m²/children;<br>0-3 age; 6 m²/children;<br>4 m²/children in multifunctional spaces; | 3-6 age0 18 m²/children; |
| **HOLLAND** | 0-12 age 3.5 m²/children;<br>Extra sleeping space 0-1.5 age; | 0-12 age 3 m²/children; |
| **NORWAY** | 0-3 age; 5.3 m²/children<br>Over 3 years of age; 4 m²/children | It is recommended 6 times as much as the outer surface where the nature connects to the inside; |
| **SPAIN** | Minimum spaces. 30m² with 2 m²/for each child | 0-3 years minimum 75m²;<br>3-6 years miniimum 150m² |
| **SPAIN - CATALONIA** | 0-12 months; 4 m²/child;<br>1-2 years; 3 m²/child;<br>2-3 years; 2.5 m²/child;<br>3-6 years; 2 m²/child;<br>Multipurpose space minimum 60m²; | For PI with children over 6 years of age minimum 300m²;<br>For PI with children up to 2 years of age minimum 75m²; |
| **ENGLAND** | 0-2 years: 3.5 m²/child;<br>2-3 years; 2.5 m²/child;<br>Over 3 years; 2.3 m²/child; | No recommendations;<br>Earlier 9 m²/child; |

| | | |
|---|---|---|
| **SCOTLAND** | 0-2 years; 2.7 m²/child;<br>2-3 years; 2.8 m²/child;<br>Over 3 years; 2.3 m²/child; | No recommendations |
| **CROATIA** | 60 m² for classroom (regardless the age) | 40 m²/child;<br>For objects over 100 children;<br>35m²/child;<br>Minimum 25m²/child, it is accepted where there are other floors |

***Table 1: Standards and recommendations in Europe***

## 5.0 Anthropometric measures

Anthropometric surveys give the dimensions of the average child, as well as the maximum and minimum sizes for each age group. As even children from 0 to 5 years old undergo a process of rapid physical development, as such it gives large variations in children's dimensions. Anthropometric measures of children vary from country to country. Since no anthropometric survey has been conducted in Kosovo, we are based on data coming from neighboring countries, in particular Italy. Other countries, including studies from the World Health Organization (WHO), have also been compared. The dimensions are given in mm, for each age group.

A-length and B- width

| **Age** | **Germany**[1] | | **Italy**[2] | | **Turkey**[3] | | **WHO**[4] | |
|---|---|---|---|---|---|---|---|---|
| | Girls | Boys | **Girls** | **Boys** | Girls | Boys | Girls | Boys |
| **0 -12 months** | | | | | A=534 | A=542 | A=527 | A=534 |
| **1 year** | | | | | A=805 | A=830 | A=789 | A=802 |
| **2years** | A=1053<br>B=262 | A=1065<br>B= 266 | **A=943** | **A=970** | A=935 | A=955 | A=918 | A=929 |
| **3years** | A=1160<br>B= 271 | A=1180<br>B=276 | **A=1034** | **A=1058** | A=1030 | A=1042 | A=1022 | A=1031 |
| **4years** | A=1248<br>B=282 | A=1262<br>B=287 | **A=1117** | **A=1134** | A=1107 | A=1120 | A=1108 | A=1112 |
| **5years** | A=1354<br>B=286 | A=1370<br>B=292 | **A=1097** | **A=1204** | A=1177 | A=1190 | A=1184 | A=1187 |

***Table 2: Anthropometric measures***

**Based on these data, preschool institutions furniture is designed.**

[1] https://dined.io.tudelft.nl/en/database/tool
[2] https://www.sipps.it/pdf/agad2007/cicognani.pdf
[3] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4805217/
[4] http://www.who.int/childgrowth/standards/height_for_age_field/en/

## 6.0 Flooring

As a very important issue in determining the criteria for the functioning of a preschool institution, flooring is treated in different places and different forms. It is preferable that the PI's to be extended in the ground floor. In other cases where they lie in two or more floors, attention is given to the children safety aspect. The design of the facility and other features should provide safe and managed evacuation of children and personnel from the facility in the event of a fire or emergency. For safety reasons there should be special stairs to the ground floor that are only used by the nursery / kindergarten, and not by other building users, where this is not possible, then a special shelter or elevator should be provided.

Providing a fire-proof shelter ensures that children and staff are gathered during the initial phase of a fire alarm or other emergency to enable staff to count all children prior to evacuation. In this case there is a storage room (20-40 m2) for the placement of evacuation beds. The warehouse should be near the exit / elevator.

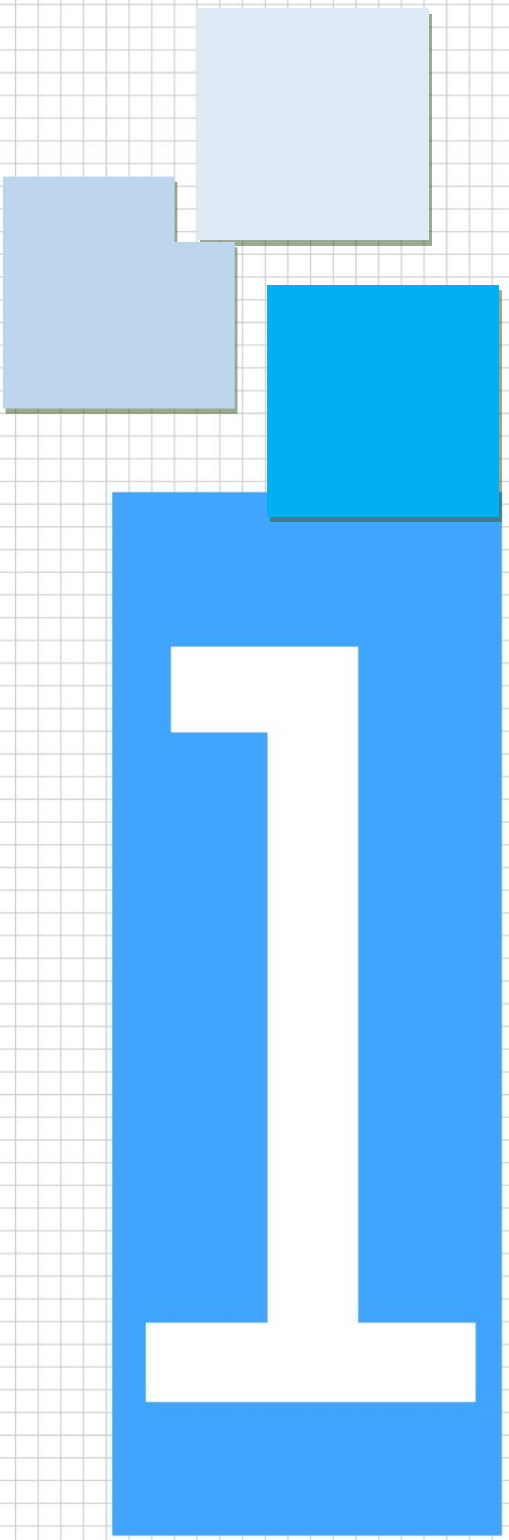
The administrative premises and the doctor's room should be located on the ground floor, near the entrance[5]. Buildings must be constructed of non-combustible structural material or materials that do not release harmful substances during combustion.

The collection point for children and infants should not be on the street, but in a space separated from the kindergarten building, on an open area (yard or garden). The collection point should provide shelter from unfavorable weather conditions and should be large enough to accommodate all kindergarten residents.

Moveable beds (with tyres) should be used during evacuation, by placing several infants in each bed (1 bed / 4 children). It is important that the roads used for evacuation have no floor level, until to the point of collection. Elevators should be able to accommodate at least four evacuation beds (125cm x 70cm) with enough space for two adults. The elevators shall be capable of operating on power supplied by an emergency generator in the event of a power failure. In Kosovo, most of the technical criteria mentioned above are not fully implemented, but these criteria need to be applied.

[5] http://ec.europa.eu/oib/pdf/mit-standard-building-specs_en.pdf

# PLANNING CONCEPTS



- Availability of suitable land;
- Neighborhood and relation to residential area;
- The size of the building compared to the authorized occupancy rate;
- Topographical features and suitability for the building;
- The geo-morphological features of the terrain should ensure convenient and comfortable usage of the building in all seasons. The land for construction should probably be flat, dry and away from industrial areas and facilities that release harmful substances to health;
- Materials used for construction and furnishing of building environments should be non-harmful to children (anti-bacterial and anti-allergic);
- City / village planning and regulations;
- Community involvement (local community) and its interest for the project;
- Availability of utilities (water, electricity, sewage, telephone);

## 7.3 General conditions

The minimum conditions required for the surface of preschool institutuions are as follow:

- Number of inhabitants[6]:
  a. Nursery buildings 0.3 m2 / inhabitants;
  b. Kindergarten buildings 1.0 $m^2$/ inhabitants;
- Optimal service distance, respectively optimal airline radius service[7]?:
- Urban residences:

a) Nursery buildings 300 m;
b) kindergarten's buildings 500 m;

- Rural residences:

a) Nursery buildings 300 m;
b) Kindergarten buildings 900 m;

- The minimum distance between residential buildings from nurseries / kindergartens is not less than 1.5 times as the height of the tallest residential building, on the south or southeast side[11];
- Distance between residential buildings and nurseries is up to 500 m;
- Distance between residential buildings and kindergartens is up to 1000m.

***Infrastructure of educational preschool institutions should be planned at the following locations:***

- Within the residential area;
- The location should be sunny, the yard should be oriented at least 50% sunny[8];
- In a flat location or with a slight incline;
- In a location protected from the heavy winds;

[6] UA 18/2017, Normat Teknike të Planifikimit Hapësinor, MMPH.
[7] Po aty.
[8] https://www.gsa.gov/cdnstatic/designguidesmall.pdf

- Close to road infrastructure, pedestrian and bicycle paths and with access to public transport;
- In distance from locations exposed to natural hazards floods;
- In distance from heavy traffic (road and rail infrastructure);
- More than 150 meter away from fire hazardous locations;
- More than 800 meter away from industrial buildings;
- Atmospheric pollution should be as minimal as possible (dust, asbestos, bacteria, mold, chemical pollutants, ozone);
- Location noise should not exceed 70dB[9];
- The location should be healthy with no moisture and unpleasant odors;

Infrastructure provisions can also be flexibly defined, based on local factors.

## 7.4 Exterior spaces

Location; parking area; playgrounds and sports activities; terrace; fences;

### 7.4.1 Location

To be based on demographic projections, socio-economic factors, space/area characteristics, condition and capacity of existing services.

- The minimum area of a parcel where a combined preschool facility can be built is 2000 m²[14];
- Index of Cadastral Land Use Development ***(ICLUSD) (ISHPKZh)***[10]:

Nursery buildings: ***ISHPKZh*** = 30%;
Kindergarten buildings: ***ISHPKZh*** = 25%.

- Location should be minimum 30m$^2$ for children[13]. It can vary based on the age groups and divisions given in tables 3 and 4;
- The location should have sufficient parking place for 1VP / 100m$^2$;
- Gross area built for 1 child minimum (11-15 m$^2$);
- Playground area for 1 child minimum (7m$^2$)[11];

***Parcel area for preschools institutions:***
**NURSERY BUILDINGS:**

| No. | Groups' number | Required space within the parcel: m$^2$ / for children[12] |
|---|---|---|
| **1** | For one (1) Group | 30 m$^2$/children |
| **2** | For two (2) Groups | 25 m$^2$/ children |
| **3** | For three (3) Groups | 25 m$^2$/ children |

[9] http://ec.europa.eu/oib/pdf/mit-standard-building-specs_en.pdf
[10] UA 18/2017, Normat Teknike të Planifikimit Hapësinor, MMPH.
[11] https://www.gsa.gov/cdnstatic/designguidesmall.pdf
[12] UA 18/2017, Normat Teknike të Planifikimit Hapësinor, MMPH.

| | | |
|---|---|---|
| **4** | For four (4) Groups | 20 $m^2$/ children |
| **5** | For ten (10) Groups | 40 $m^2$/ children |
| **6** | For twenty (20) Groups | 30 $m^2$/ children |

***Tabela 3: Nursery buildings***

**KINDERGARTEN BUILDINGS:**

| **No.** | **Groups' number** | **Required space within the parcel: $m^2$ / for children[13]** |
|---|---|---|
| **1** | For 1-2 Groups | 24-32 $m^2$/ children |
| **2** | For 3-4 Groups | 20-25 $m^2$/ children |
| **3** | For 5-6 Groups | 18-22 $m^2$/ children |

***Tabela 3: Kindergarten buildings***

The area of 20$m^2$/children is added for each new group. The urban criteria, depending on the characteristics, may also be adapted by local urban planning institutions through local spatial planning documents.

### 7.4.2 Flooring

Preschool buildings should be extended to the ground floor (P+0). Where there is a need for (P+1), it is allowed to the first floor functions such as:

1. Administrative services,
2. Economic spaces,
3. Necessary space for kindergarten children (up to 18 months). In this case, to the safety aspect should be given importance. Vertical communication for these cases is specified in point 8 of this guide.

The use of basement/cellar is only permitted for economic spaces and for administrative services. In this case there may be a separate entrance for these two functions. Children should never have contact with this particular entrance.

- In special cases such as: Preschools located within a residential complex:
- It is permitted development of educational activities in these spaces on the condition that functions should be separate and should not obstruct each other (noise, communication, learning disruption, physical environments such as: playgrounds, courtyard, parking area etc.).;
- Such institutions must meet the criteria as foreseen in this guide;
- Entrances, horizontal and vertical communication, as though the entire preschool institution, must be partitioned by the walls with spaces of residential complex;

[13] Po aty.

- To pay attention to the child safety aspect. A strong shield on the ground floor should be provided, from throwing various physical objects from the upper floors, so as to create conditions for free movement of the children;
- Playgrounds may not be available within the institution where the public park is approximately 110-230 meter. (For more, refer to the special point like: Playgrounds and sports activities).
- Fence can be made from materials such as: wood, metal (steel, aluminum etc.) resistant to physical conditions (resistant to shock, slipping and atmospheric). For more on this point, should refer to point 7.4.6 of this guide.

### 7.4.3 Facade

Adjustment of architectural environment of the building to the surroundings is the primary task of the designer, depending on the purpose of the building. It is preferable usage of warm materials, different layers on the facade, through which acoustic control, heat and light passage from outside to inside is achieved. Using these materials help children to learn more about experiencing materials, colors, sizes, etc.

### 7.4.4 Parking lot

The location should have sufficient parking space for 1VP / 100m$^2$ of gross built up area. At least 5% of the total number of parking spaces, must be for people with special needs. The basic dimensions of parking space for people with special needs are: 370cm x 500cm. Minimum dimensions for range parking spaces for standard motor vehicle, for access of small children up to 5 years in special transport vehicles. Except normal parking space for the vehicles, these parking spaces also have additional space for getting in and getting off from the vehicle[14].

| **Na.** | Parking lot | A-Width/<br>B-Length | Extra parking space on both sides of the parking lot |
|---|---|---|---|
| **1** | 90º | A=250cmxB=455cm | 1+1m |
| **2** | 60º | A=250cmxB=485cm | 1+1m |
| **3** | 45º | A=250cmxB=485cm | 1+1m |
| **4** | 30º | A=250cmxB=425cm | 1+1m |
| **5** | Parallel | A=215cmxB=640cm | 1+1m |

[14] UA 18/2017, Normat Teknike të Planifikimit Hapësinor, MMPH.

| | | | |
|---|---|---|---|
| **6** | Fenced | A=270cmxB=550cm | 1+1m |

***Table 4: Parking lots***

***Attention:*** Additional spaces for getting in and getting off from the vehicle can be used by two parking spaces, or logically (A+1+A)[15].

### 7.4.5 Playgrounds and sport activities

The play areas for nursery children should be physically separated from those in kindergarten. A covered area should be provided, in which bicycles and other outdoor toys are stored. The playground area can be categorized into three general types: Elastic, strong, ground/grass. Immovable furnishing (toys, seats, etc.) and walls must be made of safe materials, without any sharp edge.
The equipments (toys) should be minimum 95% of high density, plastic and polyethylene material. On toys, platforms that are more than 50 cm high from the ground, a wall must be placed.
The minimum playing area is 7m$^2$ / for child[18] and it contains:

a. Swing;
b. Slides;
c. Sandy space;
d. Climbing equipments;
e. Paths;
f. Shaded spaces (Sun protection);
g. Plant/Greenery;
h. Terrace;
i. Fences;

In cases where the public park is within 110-230 meter (not more than 2 minutes walking distance for children)[18] of the combined preschool institution, it is not necessary to provide playgrounds, neither sports terrain for children within the institution. In this case, the public park should contain most of these play areas. The way of operation, including the safety aspect, must be described in a special action plan.

***a)*** **Swings**

- Needed surface for one swing is 7m$^2$ ;
- The space between the frame and the seat should be 40cm;
- The space between two seats should be 60cm;
- The height of the seat from the ground should be 45,5-63,5cm;

[15] UA 18/2017, Normat Teknike të Planifikimit Hapësinor, MMPH.

- The height of the swing should be 1.8 meter;
- The front and back safety zone of the swing should be 1.9 meter and 1.5 meter, while by the side 1.5m[16];
- The height of the swing should be 1.8 meter[17];

**b) Slides**

The minimum spaces around the equipment consist of three elements:

**The space the equipment occupies; free space; and "falling space".**

The dimensions of the free space are: standing position a: 1000 mm; b: 1800 mm; sitting position - a: 1000 mm; a: 1500 mm; "hanging" - a: 500 mm; b: 300 mm up and 1800 mm down;

Slides should not be oriented towards the south. Rotating equipment should have at least 2 meter clear space around. For the equipment (toys) less than 1.5 meter high, there must be a minimum surface area of 1.5 meter.

Dimension = (Maximum height - 1.5 meter) x 0.667+1.5 meter;

- For "spring swinging chairs", "sliding horses" must have a surface of at least 1 meter;
- In cases where sealed equipment, such as tunnels are more than 2 meter long, they should have at least 2 openings;
- For equipment that are easily accessible and with the height (fall height) more than 600 mm, an adequate (soft) wall and surface must be placed;
- For equipment which are not easily accessible and with a height not exceeding 1000mm, there is no need for a barrier, but only the surface should be adequate (soft);
- For the equipment that are not easily accessible and with a height of 1000-2000mm, an adequate (soft) wall and surface must be placed;
- Adequate (soft) wall and surface must be placed to all equipment with height above 2000mm;
- When the wall (fence) is needed it should be 600-850mm high.

**c) Sandy space**

Recommended surface for sandy areas is 0.12-0.15m$^2$/child. This space should be filled with sand at least 50cm thick. It is preferable to have a water source nearby, so that children can combine water and sand.

[16] https://education.govt.nz/assets/Documents/Early-Childhood/Starting-an-centre-based-ECE-service/DevelopingPlaygroundsGuide.pdf

[17] Metrick handbook Planning andDesign Data, Second Edition, Edited by David Adler BSc DiC Deng Mice Civil engineering Consultant.

**d) Climbing equipment**

Elements of climbing equipment should be generally arched, with diameter 1.52-3cm (for nursery) and 2.41-3.93cm (for kindergarten). The maximum height of the equipment for kindergarten children should be 81.2cm. The safety area around the equipment should be minimum 1.80m[18].

**e) Paths**

Paths should be wide enough to be used for bicycles, minimum 1525mm and should be made of non-slip materials. In cases where the paths are concrete, then a minimum 10mm of impact resistant surface should be applied to the concrete.

**f) Shaded spaces**

At least 50% of the playground should be sunny during active hours, and also shade spaces are needed that can be naturally created through different trees or coverings that prevent ultraviolet rays during the summer time (10:00 to 17:00), in a way for playground to have 25% shade.

**g) Plants/Greenery**

Plants help to define spaces or creating boundaries between different areas, they provide privacy, sun protection, help to clean air and to reduce noise, wind and humidity control and have a positive impact on the children's psychology. At preschools institutions we need to be careful about using their types. It is not allowed the use of following plants:

- Poisonous plants;
- Plants that cause asthma;
- Thorny plants and
- Plants that attract insects.

**h) Terrace**

The terrace should be joint with the classroom via filter/space for wardrobe and children's bath. It must have surface of minimum 15m$^2$ for group of children, surrounded with wall. It is preferable the wall to be made of laminated glass. The terrace floor should not be slippery. Access from the inside to outside and reverse should ensure appropriate communication for all age groups and for the children with special needs.

Use of playgrounds and other sports activities that are not mentioned in this guide, may be used by preschool institutions in condition that each toy or field for physical and mental

[18] https://www.cpsc.gov/s3fs-public/325.pdf

children development activity to be allowed/certified for use, in accordance with the standards deriving from European Union directives.

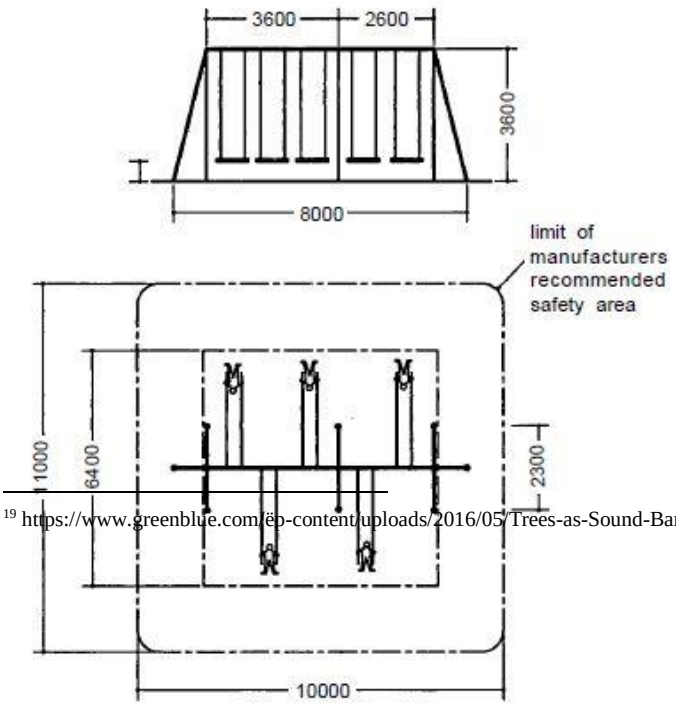
### 7.4.6 Fence

The preschool institution fence separates the public space (for everyone's use) and the semi-public and private space (the PI courtyard). The way how the fence is placed, the material, its height, have an important role in terms of children safety and in terms of reducing the noise level emitted by movements in public spaces. The yard should be secured with a minimum fence of h = 1.25 meter[21]. When the neighborhood is at high risk, the fence should have a height of h = 2.44 meter[22]. The spacing between the verticals of the fence should be 87mm-228mm. It is preferred for the distance between the wall verticalst to be less than 10 cm. It should be made of transparent and semi-transparent materials. There should be no sharp edges and all edges should have at least 25 mm radius. The fence can be made from materials such as: wood, metal (steel, aluminum etc.) resistant to physical conditions (resistant to shock, slipping and atmospheric).

Trees can be used to obstruct the effects of many problems, including noise pollution. Noise reduction can also be done with green barriers. The barrier should be placed as close as possible, the noise source is achieved by combining the green barrier with the topography.[19].

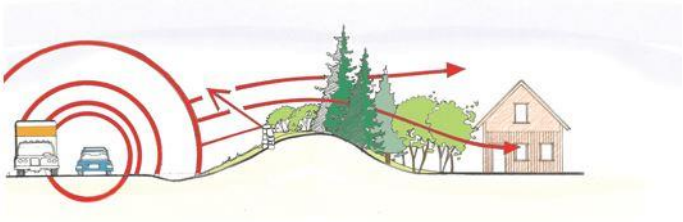
The fence should be designed in that way as the noise level within the PI yard should not exceed 70 DB.

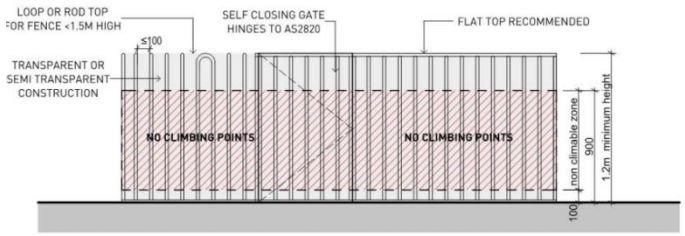
***Figure 2: Playgrounds for children***

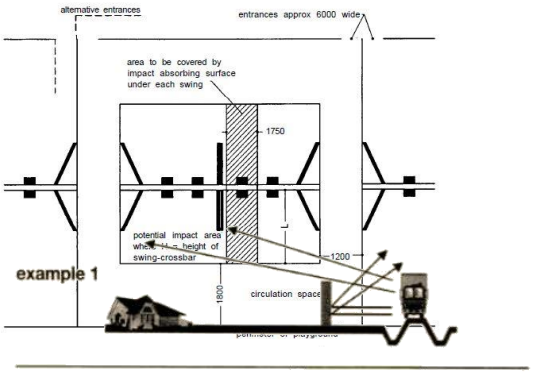


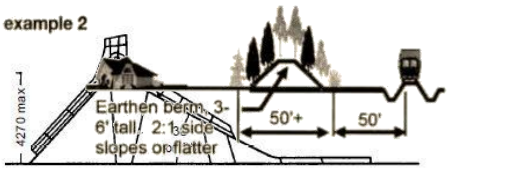

[19] https://www.greenblue.com/ëp-content/uploads/2016/05/Trees-as-Sound-Barriers.pdf

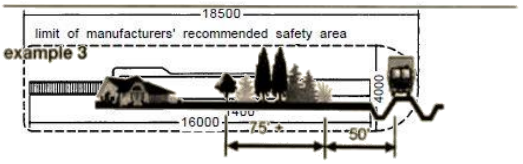
***Figure 3: Green barriers / fence - acoustic and physical protection***

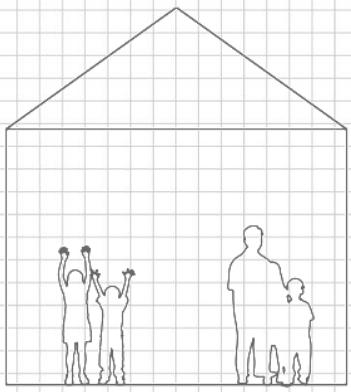






INTERIOR SPACES

# 2

# 8.0 INTERIOR SPACES

There are three main spaces in early childhood education centers: children's spaces, staff and service spaces.

**a) Children's spaces**

Interior spaces should be designed to enable optimal communication between children and to facilitate staff supervision. Infants need open spaces where they can crawl, explore, and interact with their teachers; kindergarten children need more space, so they can be engaged in more sophisticated activities. Children's spaces should be opened and if necessary to be transformed from smaller units to larger units, with separated walls or curtains. Recommended surfaces for teaching and pedagogical support areas are based on required capacities, furniture dimensions, width of interior circulation and type of activities. Space areas are calculated based on the number of users and the type of activity carried out in those buildings. Surface circulation areas are calculated as a percentage of areas designated for activities (up to 15%).

**b) Staff space**

The staff space is preferably to be close to the main entrance and should be planned as own space separated from the children's space. The size of the staff space depends on the size and type of garden, as well as from the number of staff.

**c) Service space**

The space for service should be separate from the other part of the nursery/kindergarten and should have a separate service entrance. The size of the space for service is proportional to the size of the nursery/kindergarten.

## 8.1 Construction system

The design of the Preschool Institution space is made in accordance with the square areas recommended by this guide. During the planning, should be ensured to be respected design module for public buildings **(Module n = 1.2m).** Respecting this module, the construction system, depending on its type, must provide static stability. Interventions in existing objects should be carried out in a way not to endanger the static stability of the building.

**Basements -** are proposed to be made of Class C 30-37 dosed concrete per $m^3$ and cleaned in well-vibrated thick layers, with appropriate dimensions and shapes depending on static calculations, including frames, working form, support and all requirements to complete work in a quality way.

- **Pillars -** Reinforced concrete or metalic, ordinary and according to the designer's instructions.

- **Stairs** - are realized with ramps, with sloping toothed elements, with corresponding pause and holding timber. The banisters are cemented at the same time with the ramp. Concrete class C 25 to C 30, including frames, reinforcement, service scaffoldings, excavation of the foundation, reinforcement laying, and any other obligations to complete the work.

- **Roof -** each roof must be mechanically persistent, strong and stable and its main function is to protect the interior from water, snow, winds and other environmental impacts, but also to be capable of conveying water vapor out.

.

**a) Sloping roof**

Sloping roof is part of the facility which has been unfairly neglected when it comes to energy saving, noise and fire protection. Roof construction is most exposed to atmospheric impacts (rain, snow, wind, sun ...), therefore, it is necessary to intervene (in existing buildings), respectively to insulate the sloping roof qualitatively in new buildings.

Construction type selection. Choice of the type of sloping roof made from wood, mainly depends of:

- width and length of the building, construction step;
- function and architectural effects for space;
- types of sheathing – roof covering;
- durability of the building, time character etc.

Particularly important is the proper coordination from the physical aspect of the functional layers during sloping roof insulation. Diffusive features and airtight sealing are crucial for the durability and effectiveness of the construction. Hermetic sealing of functional outer layer can further reduce heat loss, reducing energy consumption and costs.

Glassware and stoneware insulation materials have the highest fire resistance grade - A1, which means that they are non-combustible.

**b) Flat roof**

Prejudicing that flat roofs are the worst choice comparing with sloping roofs has already been overcome. Research into damages caused by flat roofs in the EU has shown that over 80% of damages were caused due to poor design and implementation of works, primarily due to a lack of knowledge of the construction physics.

**c) Green roof**

In recent years, the impact of buildings on the environment and the solutions as foreseen from the green roofs, have become increasingly important. With the development of broader point of view about sustainability is crucial to be remembered that from the perspective of the building life cycle, the impact of each building on the environment results from its energy consumption while is in use, as well as from the usage of renewable energy and the usage of sustainable materials.

The green roof system could be fit on all types of roof constructions: on concrete or steel surfaces, invert roof constructions or any other type of roof materials that are used.

The design and static calculation of the facility for new and existing spaces in which is intervened must be in accordance with European standards EN, DIN, ISO, ENV etc., and all those standards that fall under the responsibility of construction engineering.

## 8.2 Walls

The walls divide spaces within the preschool institution. Depending on the type of the building structure, it should be placed in such way that it does not impede the movement of children and communication among spaces within the institution. Particular attention should be paid to the moisture absorbed by the walls during the air condensation. The presence of molds on the walls causes health problems for children.

Coated walls, where they are attacked with children, is recommended to be at a height of 1300 mm and should consist of non-toxic, durable, flexible and soft materials preventing injury of children during collision. 'Angular protectors' are used on the edges that present a risk that a child may collide with: the edges of walls, radiators, window panes, edges of desks, stairs and so on[22]. Coated walls in sanitary spaces are made of tiles (porcelain, ceramics, etc.) that are easy for maintenance and hygiene.

## 8.3 The height of ceiling

The height of ceiling should be standard 3000 mm, in order to provide the necessary insulation.

- The level of ceiling should be proportional with the size of the room.
- Ceiling of each activity room/classroom, in environments designed and constructed for purpose of kindergarten, should be a minimum of 2750mm from floor level (used net height) until the level of ceiling.
- In cases when hanged ceiling is planned, the clear floor height of 2750 mm should be maintained, while the cross-section for various installations should be a minimum of 500 mm.

## 8.4 Floors

The floor must be resistant to stains, shocks, oscillations, easy for maintenance and to restrict transfer of noises. It is preferable to be made of porous materials due to its acoustic and fire resistance, which in contact with fire does not release toxic gases, should not create mold, draw and absorb dust, so as not to cause allergies and to not pose any threat to children with asthma. It is not allowed usage of the materials with ingredients which can lead to serious health conditions after repeated exposure, such as allergic reactions, respiratory problems and even disorders of the hormonal system.

## 8.5 Colors

In order to create a favorable classroom environment, the use of colors is also important as colors can often influence children's stimulation. Excessive stimulation is often caused by the large amount of bright colors such as red and orange, the balance of colors in relation with the relevant space such as green (in the open) and fourth must be taken into consideration, which promote the feeling of calmness, relaxation, pleasure and amenity. The colors, along with the sights, sounds and fragrances, all contribute to what a child feels at first impression. A classroom that is well-lit, organized, and welcoming, helps children feeling like at home. The orange, yellow and green colors are the most welcoming colors. The walls painted with these colors create a warm and welcoming space. Also, the blue color is welcomed. Some of the color features:

- Green color: relaxation and calmness, happiness, amenity, peace, hope and emotion.
- Yellow color: vibrant and active, accompanied by positive emotions associated with the sun and summer.
- Grey color: negative emotions, including sadness, depression, boredom, confusion, fatigue, loneliness, anger, and fear[32].

If a calm and cool atmosphere is required, then green and blue to green colors should be chosen, as they even physiologically reduce heartbeat, giving a sense of calmness. If the

warm atmosphere is needed then this could be achieved by the red, pale red, orange and yellow colors.
In spaces with playing funcionality and active work, warm colors and tones between light yellow, yellow to orange or light orange are advisable, because they stimulate adrenaline production, therefore affect creativity and motor capacity, while in dining or sleeping areas, cold colors and tonalities are preferred.

## 8.6 Multipurpose spaces

One of the most important elements in early childhood education centers is the creation of common/public spaces. These spaces are multifunctional and intended to be used by children for various activities, artistic activities and different games. The design of the multipurpose space depends on the size of center. This space is advisable to be built among game rooms for easy and direct access. Multipurpose space represents the essence of public and group activities.
In cases where the building has more than 4 classrooms (groups), then multipurpose space is presented as follow:

- Multipurpose space is recommended to be positioned near to one of the entrances;
- For the building with 4 groups, space surface should be 80 $m^2$ and for each new group, the area increases by 10 $m^2$/for the group;
- Recommended orientation towards south;
- The floor should be hot, elastic and non-slip;
- Windows in multipurpose spaces should be 1/5 of the floor area;
- The temperature of multipurpose space should be 16-18°C;
- Lighting and natural ventilation with humidity of 40-60% in multipurpose spaces should be ensured[33];

Near to the multipurpose space, it is necessary to be allowed deposition of parents' clothes. The multipurpose space should have a warehouse to store the equipment used in the properties room. Minimum area is 6$m^2$/for 4 groups and 0.5 $m^2$/for each new group.

## 8.7 Children admission

In these buildings we have several types of entrances: the nursery entrance, the kindergarten entrance, the economic entrance and the administrative entrance, which must be separated and their functions not to be interfered.
Entrances of the nursery/kindergarten (10 $m^2$) should be separated from the administrative and economic entrances. It should have wind protection and to be closely joint to the reception/delivery space (4$m^2$/per group) and the infant's chairs storage.

## 8.8 Classroom

The main daily activities including sleeping and staying are conducted in the classroom. Area 3.3-5.9$m^2$ per child[23].The most of their daily time children spend in this space. Various children's activities are taking place in this area, including sleeping (for children over 2 years), entertainment and staying. Lighting should mainly be concentrated on the eastern and southern parts, which are indirectly joined to the terrace, through the wardrobes and sanitary nodes. Segmentation of the classrooms is done based on age groups (see)

.

| No. | Children's age group<br>9 months – 3years (nursery)<br>3-5 years (kindergarten) | Number of children by age group | Number of educators in relation to the number of children by age group | Required classroom area for number of children. |
|---|---|---|---|---|
| **01** | 9 Months – to 2 years | 8-12 | 2:10 / 2:12 | 4 $m^2$/ child |
| **02** | 2-3 Years | 12-16 | 2:14 / 2:16 | 4 $m^2$/ child |
| **03** | 3-4 Years | 20-22 | 2:20 / 2:22 | 4-6 $m^2$/ child |
| **04** | 4-5 Years | 20-24 | 2:22 / 2:24 | 4-6 $m^2$/ child |

***Table 5:Classroom parameters***

**Bookstore within the classroom -** should be provided a suitable space for bookstore in the classroom so that children have access without asking for permission, should possess reading and writing desks. Some of the common educational spaces in the kindergarten/nursery are: art spaces, bookstores, drama spaces (theatre), science/discovery activities and math/manipulative toys. Noisy spaces should be separated from the quiet ones. Noisy spaces like theatrical and musical performances should be placed at an angle away from the quiet ones.

## 8.9 Bedroom

The bedroom should have a direct connection to the activity room. The size of the bedroom is determined by the number of children, usually up to 2 years of age. There should be windows on the wall that divide the bedroom with the activity room, so that educators can see children at all times. A special care should be taken to the position of any equipment control in a bedroom, so that these controls are not reachable to children. The temperature in the bedroom should be 16-20°C.

The beds must be separated 700 mm to each other, so that the educator can move. It is recommended to place a furniture and a light as well between the beds, so that children will feel like at home. The bedroom should provide at least $2m^2$/infant[23]. The minimum width of the room to be 3.5m. The width of the room should not be less than ⅓ of the length. Must be oriented towards southeast or south. Bed dimensions: 1250 mm x 700 mm x 260 mm (h).

## 8.10 Infant's chairs storage

A room with area of about 0.2 $m^2$/child should be provided near to the entrance for preserving infant chairs. Directly must communicate with the hallway or lobby. It is not necessary to have natural lighting. It is recommended to be placed in the central part of the hallways, or the main lobby at the entrance to the nursery/kindergarten.

## 8.11 Children's wardrobe

The spaces for exchanging children's clothes within the nursery/kindergarten should be foreseen with a surface of $1m^2$/per child.

## 8.12 Storehouse of teaching materials

Storehouse of teaching materials should be - $0.2m^2$/per child[20]

## 8.13 Toilets

Toilets should be planned for children in the nursery/kindergarten, for working staff and those who visit the nursery.

Toilets and other hygienic facilities for children should provide:

- Hygienic services: 0.39 $m^2$/per child[37];
- 1 WC shell and sink/10 children;

[20] Po aty.

- Lower height of sink, shell, hands dryer with adequate dimensions for children should be provided. For hygienic reasons there should be a sink for adults in every bathroom;
- There should be no door in the closets which separate the shells among them, this is applied for the children up to 3 years of age;
- Until 3 years of age, toilets are shared by both genders, 3 to 5 years of age, toilets should be separated and there should be doors to the closet for privacy reasons;
- To be directly accessible from the activity room and outdoor play areas. The view inside should be ensured through the windows, so that educators can be able to observe;

The wall of the toilet should be tiled at least up to 1300mm high. Wall and floor tiles should not be slippery. Toilet booths should be made of safe material for children, antibacterial, water-resistant and easily materials for maintaining. The appropriate height of the sink is about 500 to 600 mm from the floor level. The toilet shell should be 300 mm higher from the floor level.

## 8.14 Diaper changing space

This space should contain:

- One bed with a surface not less than 0.9m$^2$ and the height not less than 850 mm;
- A baby cleaning booth, not more than 1 meter from the diaper place;
- The place for immediate hand washing for the educators;
- Cabinet for putting diapers and similar items with dimensions 800x500x800mm; Within this space should be foreseen also a storage for keeping diapers - 0.33m$^2$ / per child[38].

## 8.15 Room for milk

Rooms designed for the preparation and storage of baby bottles should be adjusted in that order to facilitate efficient and hygienic distribution of food products and should include separated and contaminated circuits. The minimum area of the room is 16 m$^2$.

## 8.16 Monitoring by educators

Preschool institutions should be designed in such way that any space where children stay should be monitored by educators, including toilets, diaper exchanging rooms, spaces for the activities inside and outside of the institution.

- In the toilets, the shells should be separated by a wall no higher than 1300 mm and there should be no door for the nursery children.
- Views in the bathrooms, diaper exchanging areas should not be seen by outside visitors.
- In places where full monitoring of the entire area cannot be achieved, mirrors may be placed.

## 8.17 Kitchen

Kitchen for food preparation should be 0.28 - 0.43 $m^2$/per child[39]. Kitchen area is the part that consumes the most energy. Management (school, municipality, or some private institution, etc.) should consider different possibilities of kitchen placement. The kitchen may be in the facility, or meals to be prepared outside the facility and brought to the nursery/kindergarten. Kitchen should be separated from the multipurpose space. It should be directly connected to the table. The kitchen floor should not be made of slipping materials. Non-packaged foods should be stored in clean and covered dishes. Food should be stored at a minimum 15cm above the floor. The foods which are shipped must be prepared in commercial kitchens and to be delivered by approved/licensed carriers by the local health department/sanitary hygiene.

## 8.18 Dining table

Table 0.4 $m^2$ for children. The dining rooms should be located in such order to create a pleasant atmosphere in terms of visual, noise insulation and so on. Must be equipped with tables for four children and tables for two children (+/- 120 x 80 cm and +/- 80 x 80 cm respectively). The table is connected with the multipurpose space and the opportunity of expanding should be possible through the separated walls or curtains.

# 9.0 ADMINISTRATIVE SPACES

Administrative space contains:

- Reception:
- Office of the director:
- Office of the secretary;
- Room for parent – educator meetings;
- Office of the pedagogue / psychologist;
- Office of the pediatrician;
- Nursing;
- Toilet and wardrobe for personnel;

The administrative entrance should be separate from the entrance of nursery/kindergarten children.

## 9.1 Reception

This space should be designed in a way to be accessible for parents and children. The reception desk should be designed in a way to be suitable for children and parents of all categories. The rooms and functions may vary depending on the size of the institution.

## 9.2 Office of the director

This space should have a minimum surface of 15m$^2$, minimum width of 3 meter and should have adequate equipment that enables fulfillment of institutional tasks and obligations. To be positioned in a space that enables easy access by visitors, preferably near the reception. Must have minimum of 2 hours daylight per day and it is recommended to be oriented towards east or southeast[40]. The director's office can also perform the function of the room for children isolation, in case of emergency (temporary illness of a child etc.)

## 9.3 Office of the secretary

Is placed as anteroom of the director’s office when the nursery/kindergarten has more than 75 children. Minimum area should be 6m$^2$, minimal width 2 meter and should have electronic equipment and supplementary inventory to enable full operation.

## 9.4 Space for parent-educator meetings

Required office space where parent-educator meetings take place is minimum 12m$^2$/per 100 children, and minimum 3meter width. This office should have a minimum 2 hours of day-light and it is recommended orientation towards east, southeast or northeast sides. It is a space, where weekly parent-educator discussions take place, but can also be used for other similar purposes. This office should possess electronic equipment and accompanying inventory, which enables fully operation. Also to be equipped with a bookstore which takes care (keeps) information about the garden activities.

## 9.5 Office of the pedagogue / psychologist

This office is necessary for preschools institutions that have over 12 groups of children. For nursery spaces with no more than 6 groups, this office is designed at the same space for psychologist, physician/pediatrician, and should be located next to the nursing room or should be spatially joined to it[21]. Minimum area of this office should be 8m$^2$ with minimum width of 3 meter. It is preferably to be near to the entrances for children. Must be equipped with a sink, refrigerator, cabinet, bed for visits, disinfectant, chair, armchair, desk, printer, telephone, computer etc. The room should have a direct day light of at least 0.5 hours per day and it's recommended orientation from the north or north-east sides[22].

## 9.6 Office of the pediatrician

The minimum area for the pediatrician's office is 10m², with a minimal width of 3 meter. There must be sufficient natural light. It is preferably to be close to the entrance(s) for children. It should be equipped with a sink with hot and cold water, refrigerator, pharmaceutical storage cabinet, bed for visits, chair, armchair, desk, disinfectant device, photocopier, telephone, computer.
Optional: playing area of +/- 3m$^2$ within the pediatrician's office[23].

## 9.7 Nurse's office

The minimum area is 10m², with a minimal width of 3 meter. Infirmary should be joined to the pediatrician's office and should have sufficient natural light. Should be equipped

[21] Normativi i uputstva za planiranje, programiranje, projektiranje i opremanje dječjih jaslica i dječjih vrtića (Narodne novine 45/77 i Prosvjetni vjesnik 4-5 od 15.12.1977.)
[22]http://ns3036873.ip-149-202-208.eu/ëebsites/ministria.turizmit/ëp-content/uploads/2017/09/Standartet__e_projektimit_te_kopshteve.pdf
[23] Manual of standard building specifications, 2011, Europian Commission, office for infrastructure and logistics Brussels

with a sink with hot and cold water, refrigerator, pharmaceutical storage cabinet, bed for visits, disinfectant device, photocopier, telephone, computer.

### 9.8 Wardrobe for personnel and toilet

The wardrobe area for personnel should be at least 10m², with a minimal width of 3 meter. While, the toilet should possess two shower cabins, two WC, two sinks, wardrobe, two seats.

## 10.0 TECHNICAL SPACES

To be the object as functional as possible, the economic entrance must be separated from the main entrance/entrances of the PI, be separated from each other, and with surfaces that meet the needs.

| | Content of technical spaces | Minimum surface in $m^2$ |
|---|---|---|
| **01** | Technical/heating room | 40 |
| **02** | Boiler depot | 6 |
| **03** | Raw material storage | 50 |
| **04** | Depot for vegetables | 20 |
| **05** | Dishwashing room | 30 |
| **06** | Spaces intended for washing clothes | 0.11/ children[44] |
| **07** | Depot for hygienic materials | 10 |

***Table 6: Technical spaces***

## 11.0 VERTICAL COMMUNICATION

### 11.1 Stairs

The stairs for children should be 125 mm high, banister 280 mm and width of minimum 915 mm. The stairs on both sides should have two different levels of handrails, one level of 900 mm height for adults and one level of 600 mm height for children. The wall (fence) should be designed in a way to not present any risk to the children, it should not have horizontals, and the distance between the verticals should be less than 10 cm. Completion of the handrails/fences should be distinctively from the background and should not be much reflective. The stairs should be constructed of soft material and not slippery.

In cases where the stairs at the same time are used for evacuation, these stairs should be separated by the doors which do not allow smoke penetration and are equipped with a mechanism which always keeps them closed. The space of the stairs shall have openings for natural ventilation which shall be opened from the ground floor or from the area for rest at the stairs[45]. For technical criteria of emergency stairs, you should refer to Regulation No. 24/2012 of the date 05.11.2012 on technical norms for fire protection of high buildings.

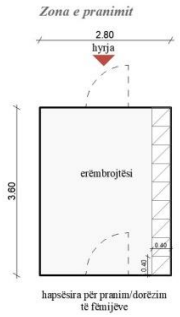
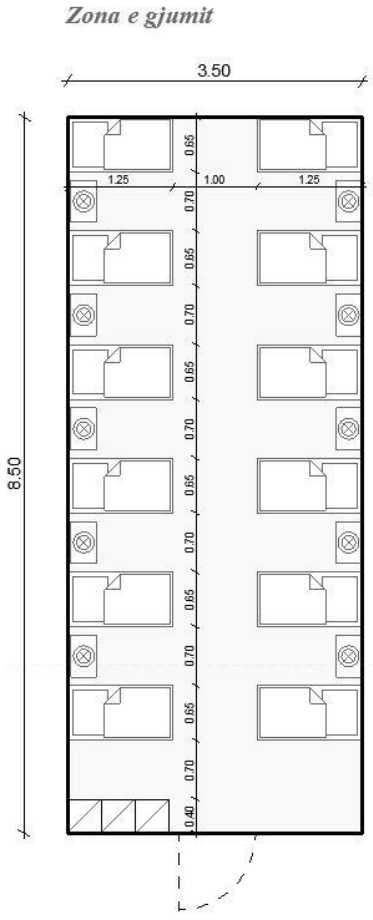
## 11.2 Elevator (4 evacuation beds + 2 educators)

In cases where the preschool institution is located even on the first floor, there is a need for an elevator. The elevator, among other things, must meet evacuation needs. It must have internal dimensions of minimal 1100mm width, 2100mm depth, and must be taken into consideration for minimum loading of 1000kg loading. In cases where the elevator at the same time is used for the evacuation, than the criteria must be met, so that an elevator can carry at least 4 children's evacuation beds (dimensions 1250 mm length and 700 mm width), together with two educators.

## 11.3 Ramps

Ramp is used as an element for accessibility needs in area of varying heights up to 120cm, in outdoor and indoor spaces. The ramp shall meet the following conditions: allowed slope up to 1:20 (5%), width of at least 120 cm in outer spaces, respectively at least 90 cm in interior spaces, resting area of at least 150 cm length, placed in every 6 meter of ramp length, strong and not slippery surface, fence built with holding handle in unprotected area, holding handle with diameter of 4 cm, formed in that way to be caught with the palm, placed at two heights of 60 cm - 90 cm. For technical criteria of the ramps, you should refer to Administrative Instruction No. 33/2007 of the date 18.06.2007 on the technical conditions of facility construction for the accessibility of disability people.

***The drawings and sketches for interior spaces:***
***Figure 3: Reception and sleeping area***

| **RECEPTION** | | |
|---|---|---|
| Minimum surface | Entrance 10m$^2$ |   |
| Orientation | North | |
| Floor | Refer to the above point | |
| Doors | Accesible only by adults, door opening from the inside out, additional explanations are given above | |
| | | |
| **SLEEPING AREA (recommended for nursery children)** | | |
| Minimum surface | 2m$^2$/infant |   |
| Minimum width: | 3.50 meter | |
| Optimal temperature | 16-20˚C | |
| Orientation | South-southeast | |
| Walls | Walls covering at height of 1300 mm, the radius of walls angels 13mm | |
| Floor | Elastic and soft, not slippery, additional explanations are given above | |
| Doors | Semi-transparent for monitoring, door opening from the inside out, see above | |
| Windows | Exterior window for natural lighting, interior window for monitoring, *1500mm parapet*, see above | |

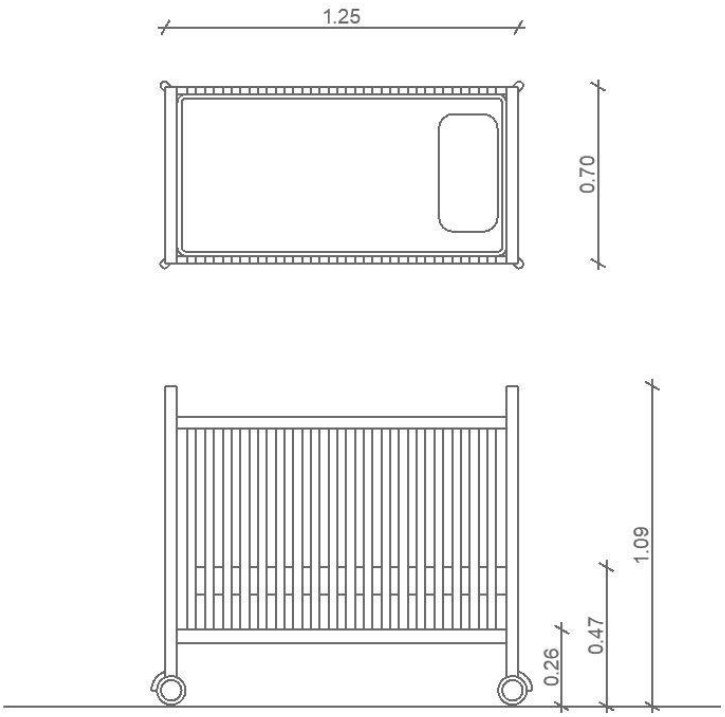



***Figure 4.Bed dimensioning***

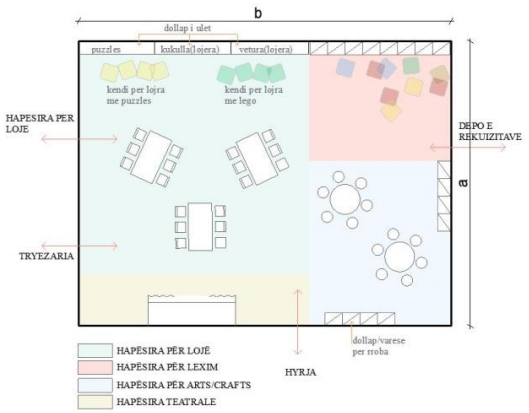
| **MULTIPURPOSE SPACE** | | |
|---|---|---|
| Minimum surface | 80m$^2$/4 groups (for each additional group + 10m$^2$) |  |
| Minimum width | a:b=1:1.5 | |
| Optimal temperature | 16-18˚C | |
| Orientiation | South | |
| Walls | Refer to the point above | |
| Floor | Elastic, not slippery, see point above | |
| Doors | Refer to the above point | |
| Windows | 1/5 of the floor surface, see above point | |



***Figure 5:Multipurpose space***

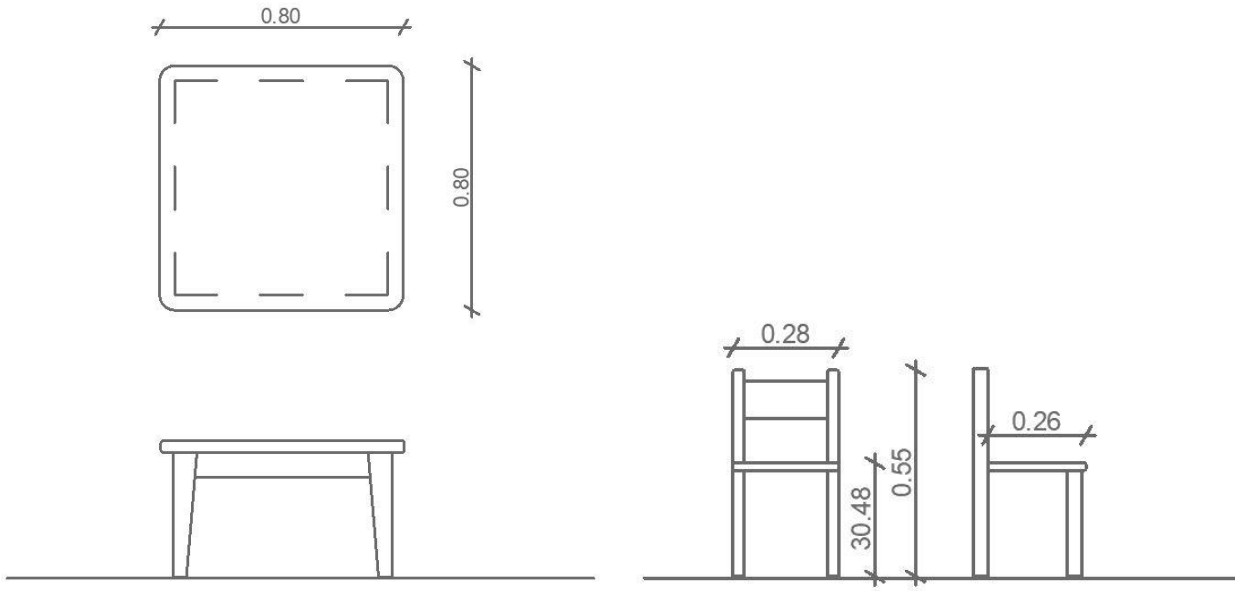



***Figure 6: The seats and children's table***

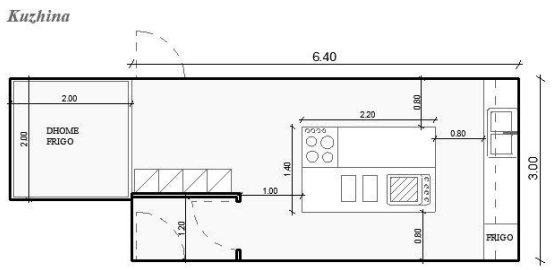
| **KITCHEN** | | |
|---|---|---|
| Minimum surface | 0.28-0.43 $m^2$/ child |  |
| Minimum width | 3 meter | |
| Orientation | North-northeast | |
| Walls | Refer to the above point | |
| Floor | Refer to the above point | |
| Doors | Not accessible to children, see above point | |
| Windows | Natural or artificial lighting, see above point | |
| | | |



***Figure 7: Table and seat dimensions***

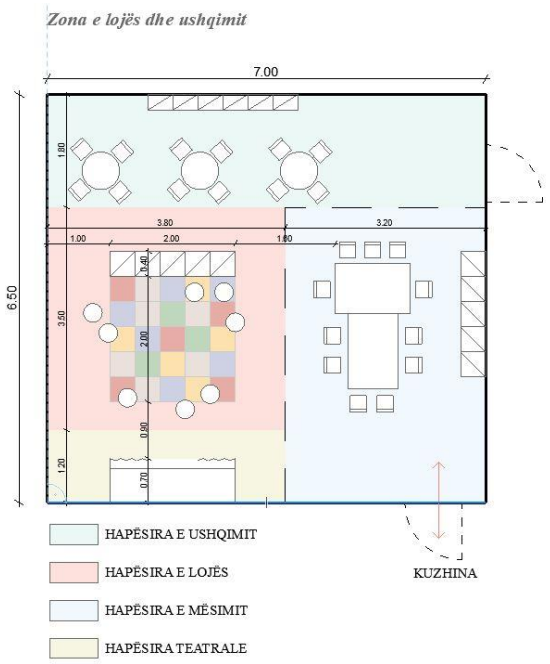
| **PLAYING AND DINING SPACE (CLASSROOM)** | | |
|---|---|---|
| Minimum surface. | Classrooms 3.3 - 5.9m2/child;<br>Dining table 4.0m$^2$/child |  |
| Minimum width | 5 meter | |
| Optimal temperature | Winter 21˚C/summer 24-26˚C | |
| Orientiation | East-southeast | |
| Walls | Walls covering at height of 1300mm,radius of walls angels 13mm | |
| Floor | Elastic and soft, additional explanations are given to the above point Elastike dhe e bute, sqarimet shtesë jepen tek pika  më lartë | |
| Doors yert | Semi-transparent for monitoring, door opening from the outside in, additional explanations are given to the above point | |
| Windows | Exterior windows for natural lighting, interior window for monitoring, additional explanations are given to the above point | |

***Figure 8: Classroom***

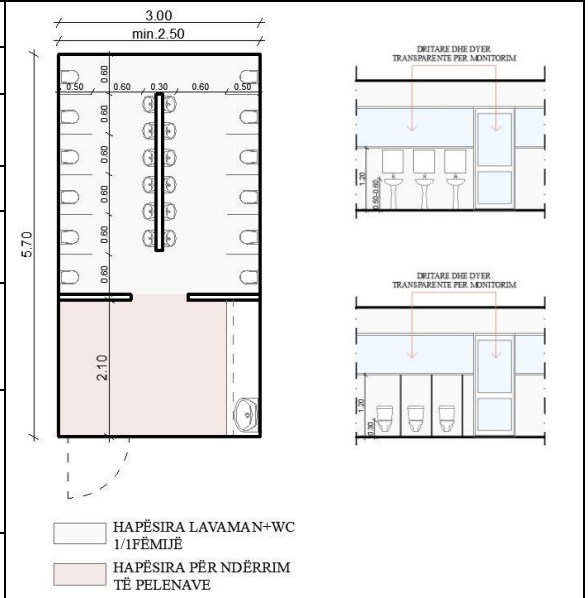
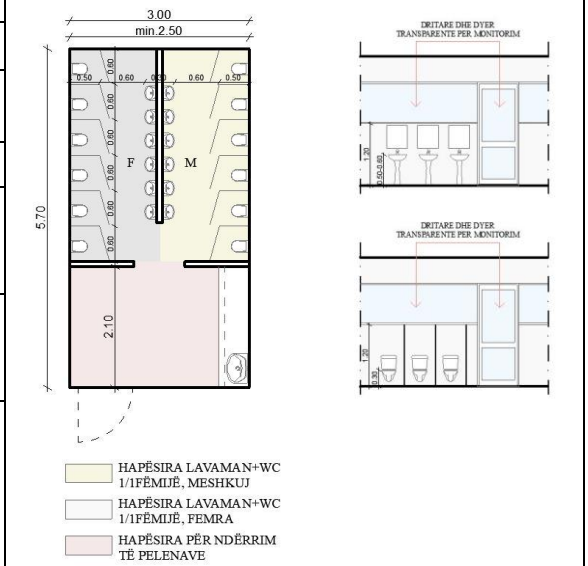
| SANITARY FOR NURSERY | | |
|---|---|---|
| Minimum surface | 0.39m$^2$/child |  |
| Minimum width | 3 meter | |
| Optimal temperature | Winte 21˚C/summer 24-26˚C | |
| Orientiation | North-northeast-northwest | |
| Walls | Covering walls at height of 1500mm, radius of the walls angels 13mm | |
| Floor | Not slippery tiles, additional explanations are given to the above point | |
| Doors | Semi-transparent for monitoring, the height of the handle 750mm, no cabined door, additional explanations are given to the above point | |
| Windows | Exterior windows for natural lighting, interior windows for monitoring, additional explanations are given to the above point | |

***Figure 9: Sanitary for nursery***

| SANITARY FOR KINDERGARTEN | | |
|---|---|---|
| Minimum surface | 0.39m2/child |  |
| Minimum width | 3 meter | |
| Optimal temperature | Winter 21˚C/summer 24-26 ˚C | |
| Orientiation | North-northeast-northwest | |
| Walls | Covering walls with tiles at height of 1000mm(1500mm S.SH), radius of the walls angels 13mm | |
| Floor | Not slippery tiles, additional explanations are given to the above point | |
| Doors | Semi-transparent for monitoring, height of the handle 750mm, height of cabines doors 1200m, additional explanations are given to the above point | |
| Windows | Exterior windows for natural lighting, interior windows for monitoring, additional explanations are given to the above point | |

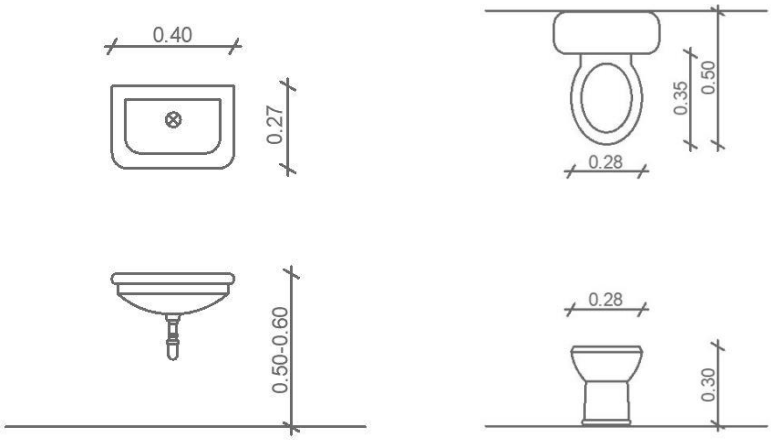



***Figure 10: Sanitary for kindergarten***

***Figure 11: Dimensioning of the sanitary elements***

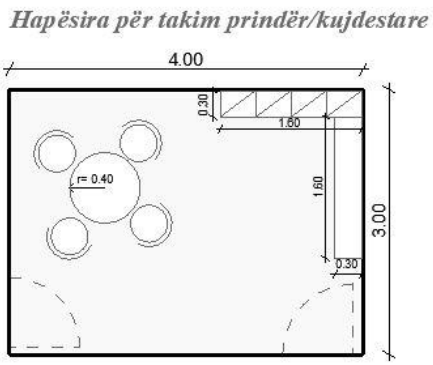
| **PARENT-CARETAKER MEETING SPACE** | | |
|---|---|---|
| Minimum surface | 12m$^2$/ for 100 children |  |
| Minimum width | 3 meter | |
| Optimal temperature | Winter 21˚C/summer 24-26˚C | |
| Orientiation | East-southeast-northeast | |
| Walls | Refer to point above | |
| Floor | Refer to point above | |
| Doors | Refer to point above | |
| Windows | Natural lightning, additional explanations are given to the point above | |



***Figure 12: Meeting space***

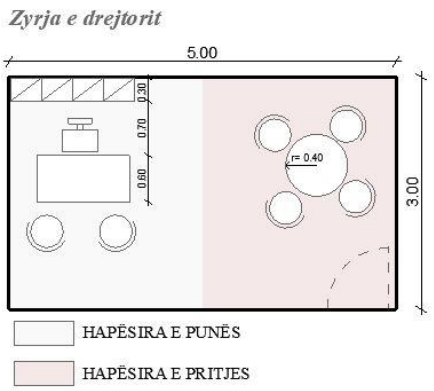
| **DIRECTOR'S OFFICE** | | |
|---|---|---|
| Minimum surface | 15m$^2$ |  |
| Minimum width | 3 meter | |
| Optimal temperature | Winter 21˚C/summer 24-26˚C | |
| Orientation | East-southeast | |
| Walls | Refer to point above | |
| Flooor | Refer to point above | |
| Doors | Refer to point above | |
| Windows | Natural lighting, additional explanations are given to point above | |

***Figure 13: Space for the director***

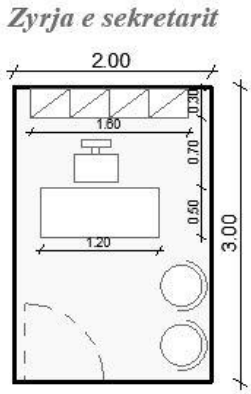
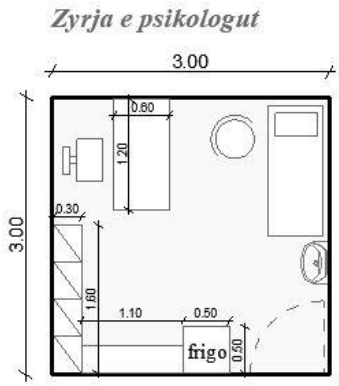
| **SPACE FOR SECRETARY (with capacity over 75 children)** | | |
|---|---|---|
| Minimum surface | 6m$^2$ |   |
| Minimum width | 2 meter | |
| Optimal temperature | Winter 21˚C/summer 24-26˚C | |
| Orientation | No recommendations | |
| Walls | Refer to the above point | |
| Floor | Refer to the above point | |
| Doors | Refer to the above point | |
| Windows | It can be even without natural lighting, additional explanations are given to the above point | |
| **SPACE FOR PEDAGOGUE/PSYCHOLOGIST (with capacity over 100 children)** | | |
| Minimum surface | 9m$^2$ |   |
| Minimum width | 3 meter | |
| Optimal temperature | Winter 21˚C/summer 24-26˚C | |
| Orientation | North-northeast | |
| Walls | Refer to the above point | |
| Floor | Refer to the above point | |
| Doors | Refer to the above point | |
| Windows | Natural lighting, additional explanations are given to the above point | |
| | | |

***Figure 14: Space for secretary and pedagogue***

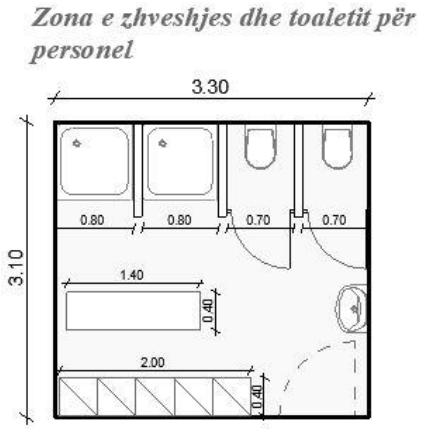
| WARDROBE SPACE AND TOILETS FOR STAFF | | |
|---|---|---|
| Minimum space | $10m^2$ |  |
| Minimum width | 3 meter | |
| Optimal temperature | Winter 21˚C/summer 24-26˚C | |
| Orientation | East-northeast | |
| Walls | Refer to the above point | |
| Floor | Non-slippery tiles, additional explanations are given to the above point | |
| Doors | Refer to the point 2.1.19 | |
| Windows | Natural or artificial lighting, additional explanatins are given to the above point | |



***Figure 15: Dressing area and toilets for staff***

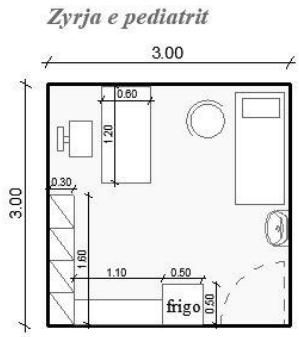
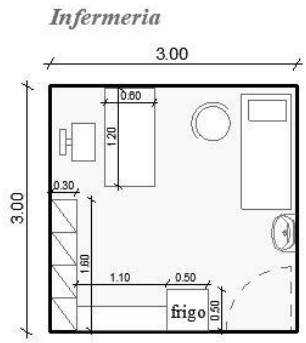
| | | |
|---|---|---|
| **PEDIATRICIAN'S OFFICE** | | |
| Minimum surface. | $10m^2$ |  |
| Minimum width | 3 meter | |
| Optimal temperature | Winter 21˚C/summer 24-26˚C | |
| Orientation | East-southeast | |
| Walls | Refer to the above point | |
| Floor | Refer to the above point | |
| Walls | Refer to the above point | |
| Windows | Natural lighting, additional explanations are given to the above point | |
| **INFIRMARY** | | |
| Minimum surface | $10m^2$ |  |
| Minimum width | 3 meter | |
| Optimal temperature | Winter 21˚C/summer 24-26˚C | |
| Orientation | No recommendations | |
| Walls | Refer to the above point | |
| Floor | Refer to the above point | |
| Doors | Refer to the above point | |
| Windows | Natural lighting, additional explanations are given to the above point | |

***Figure 16: Pediatrician's office and infirmary***

***Figure 17: Wall covering and protection from different angels;***

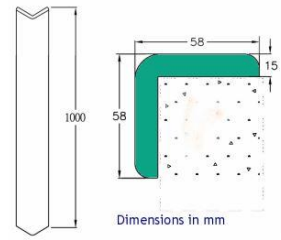
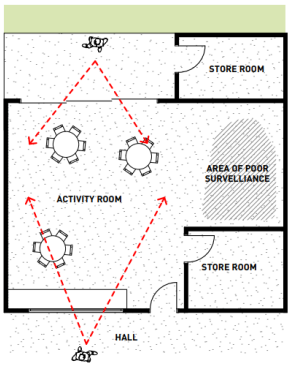
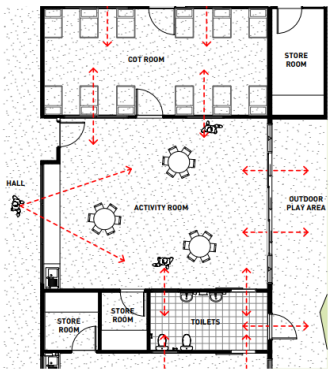
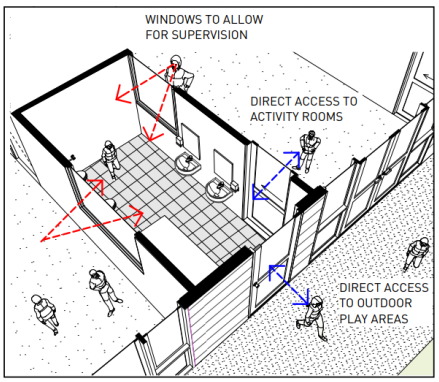



***Figure 18: Design for monitoring by educators;***



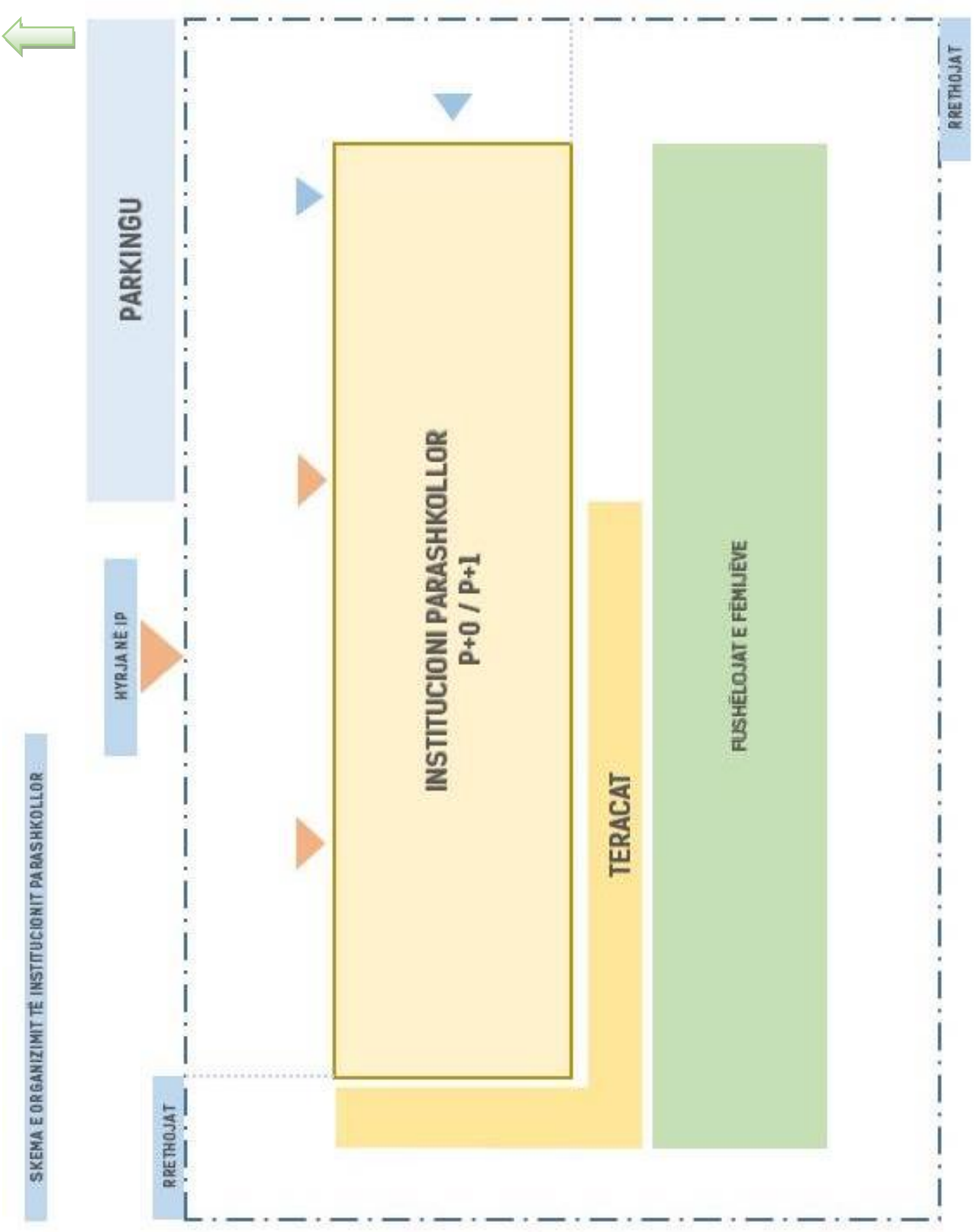



***Figure 19: Preschool institution organization schemes-location;***

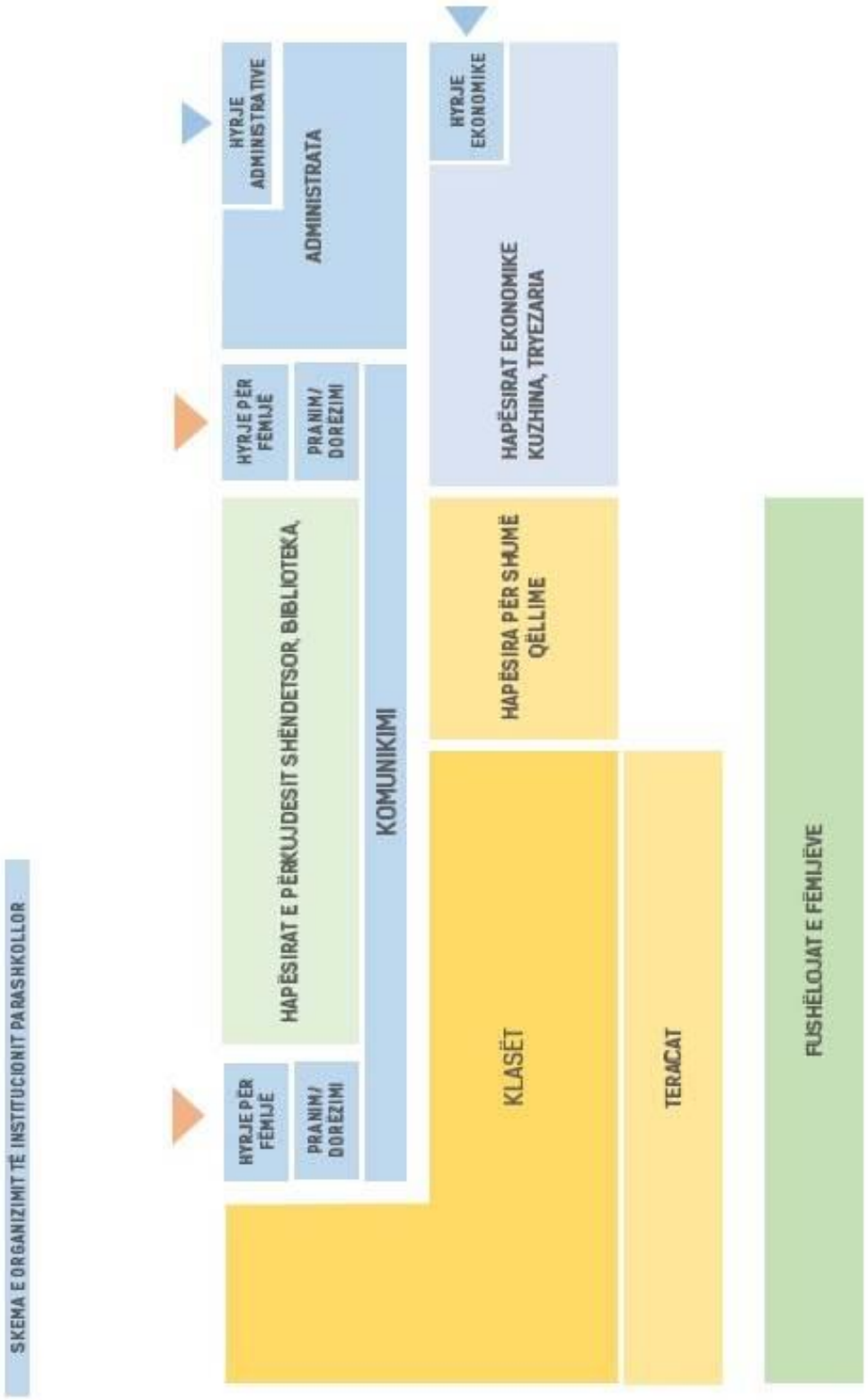



***Figura 20: Preschool institution organization schemes – internal organization;***

ACCOMODATION PLANS

# 12.0 ACCOMMODATION PLANS Functionality and Flexibility

## 12.1 Functionality

When designing the preschool building, a balance must be created between the quality of operation and the cost efficiency. This balance can be achieved by various means, such as:

- **Rational** dimensions of spaces:
- **Adapted circulation areas**: circulation spaces shall not exceed 21% of the constructed useful floor area. They must be dimensioned and adapted to the preschool users, they must be functional and to meet safety requirements;
- **Grouping spaces:** spaces must be grouped into blocks according to the function and interconnection. This would provide an easy identification of their respective activities and spaces, easy communication between different spaces, unobstructed circulation within the circulation areas and reception, easy observation of spaces and optimal use of available land;
- **Needs integration:** the location of the premises within the preschool facility must meet basic requirements such as sanitation and hygienic rules, functional and safety amenity regulations, as well as acoustic, visual and climatic amenity.

## 12.2 Flexibility

The planner should provide sufficient flexibility space to enable preschool facility staff to adapt with the facility environment and different teaching methods; and to enable planners to adapt with the buildings, for future preschool facility needs, that correspond to potential curriculum and future programs.

## 12.3 Design and aesthetic

The aspect of preschool facilities is important, so special attention should be paid. By using different materials, colors and shapes, it should look attractive, to encourage children in exploring, using all their senses and arousing curiosity, cooperation, confidence, creativity, etc.

A preschool facility that is attractive, responsive, and consistent with the design and context of the surroundings, evokes a sense of pride and ownership among children, educators, and the community.

The materials that are being used must be durable, safe and ecologic. Interior spaces through the design should be distinguished based on the activities carried out through:

- Providing a amenity and invigorating visually environment;
- Sufficient natural lighting, and with usage of the colors that give an invigorating or serene effect, depending on the function of the space;
- Good orientation in that order that the sun is distributed equally across all classrooms avoiding direct rays within the classrooms.

Quality of the design should be discussed, evaluated and checked at various stages throughout the design process until its implementation. This can be based on things that can be scientifically measured, such as the level of light in the classroom, in the multipurpose space or other more subjective aspects, such as the attractiveness of the building and how it affects to its users.

## 12.4 Costs and budget parameters

Building materials and techniques must ensure architectural quality, as well at the same time to meet budget requirements. Therefore, the planner should choose the material and techniques that create the best possible connection between quality, durability and cost. Preschools institution' capital and operating budget is usually funded from different sources, their expenditure is at different times, and they are managed by different services and people. As a result of this, there is often little motivation to factor long-term cost of any building when making decisions about its design and construction. However, to reduce the overall cost of a building and ensure its quality, it is necessary the initial design and construction costs to be balanced with the current costs, such as lighting, heating, cooling, repair and operation, as well as general maintenance of the building. This balance can be reached through:

- Using of the local resources (of materials and labor) and taking into consideration the recyclability of the materials within the quality threshold;
- Facilitating and simplifying design and construction;
- Sustainability in terms of climate effects and intensive use by the children;
- Selection of the construction elements based on life cycle cost;
- Specified materials and products that are easy to be maintained;
- Ensuring that the building will function in accordance with the design/project purpose etc.

## 12.5 General principles – Technical norms

Technical norms for construction, construction techniques and materials have not yet been established in Kosovo and construction sector professionals are relying on external norms, mainly those of the EU.
Now, with this guide will be attempted to set some norms for serving professionals during the design process.

## 12.6 Amenity parameters

There are three main sources of lack of physical comfort that could be experienced: temperature, lighting and sound. An amount of any of these, outside the acceptable range would cause a lack of convenience. The purpose of building design is to be achieved the building environment in a way that potential amenity lack to be at an acceptable level.

## 12.7 Climate amenity (Temperature)

### a. Definitions and terminology

Thermal amenity is usually attributed to two main parameters:

- feeling of thermal amenity as a result of the balance between accumulated and lost calories in the body, and
- climate control, including sun and radiation position, temperature, humidity and winds.

Planners of preschool buildings must consider the climatic conditions of the area where construction is foreseen. This guide provides general explanations related to climate conditions in Kosovo, but additional and more detailed data should be collected on the exact conditions of the corresponding areas, such as:

- minimum and maximum of monthly average temperature,
- local hydrometry, and
- the prevailing winds for each climate season and the frequency of high winds and thunderstorms.

### b. Climatic conditions in Kosovo

In Kosovo predominates continental climate, resulting with warm summer and cold winter, with Mediterranean and alpine influences (average temperatures in the country range from +30 ° C (summer) to -10 ° C (winter). However, due to unequal heights in certain parts of the country, there are variations in temperature and rainfall. December and January are considered the coldest months, while July and August are the warmest months of the year. Maximum rainfall is reached between October and December months. Between November and March, snow can be expected in Kosovo, even in the flat parts of the country. The heaviest snowfalls can be expected in Kosovo's mountainous regions. The valley between Mitrovica and Kaçanik belongs to the driest areas of the country. As a contrast, the Dukagjini Plain between Peja and Prizren is described as a very fertile area with much rainfall between November and March.

### c. Improvement of the climatic amenity

To improve thermal amenity of nursery and kindergarten spaces, possible measures for climate control are classified into two categories:

- Natural or passive measures, including orientation of the building, position and dimensions of openings, quality of materials, thermal insulation, planting near buildings etc.

- Artificial or active measures, including mechanical or electrical tools, such as heating, ventilation or air conditioning.

To control the climate effects at preschool institution areas, planners need to undertake some simple measures at the commencement of the design process.These measures relate to:

- **Orientation** of the buildings: it is recommended that the orientation of the truss and multipurpose space to be towards the south and north, because this orientation offers protection from direct sunlight. This preferred orientation can deviates by about minus or plus 30 ° (due to location requirements, or prevailing winds orientation) without having a big impact on the amenity of the trusses and multipurpose space;
- **Placement** of the buildings: the distance between the fronts of the buildings must be proportional with the height of the buildings, to allow flow of fresh air and natural light even at the lowest levels;
- **The shape and design** of the buildings, such as the possibility of cross-flow of fresh air for renewal with natural ventilation during hot season, or the choice of a four-level sloping roof in areas with heavy snowfall;
- **Planting areas:** Sowing plants can play an essential role in creating the microclimate when needed. Sowing plants effectively contributes for protection from dust, winds and sunlight. In addition, sowing shrubs and bushes make it possible protection against sunlight reflection from the ground;
- **Proper building elements:** this includes proper roof drainage and drainage around the buildings, the creation of shadows with adjustable window-shutters, the stop of the sunlight, the sun curtains, umbrellas and/or galleries that can provide additional radiation protection from sunlight, especially when the orientation of the building is not favorable.
- **Proper construction materials,** including facade materials with possible sunlight reflection, insulation materials to increase thermal action of the walls and roof.

**d. Active climate control**

**Low temperatures:** the convenient level of lower temperatures can be considered between 19 ° C for places where non-movement work activities are performed, and 15 ° C for circulation areas. Attempts to provide heat to reach these indoor temperatures usually must not be too high**.** However, a much lower minimum may occur in each of the months of heating season, where the heating system must have the responding capacities to these low temperatures.

**Recommended minimal temperatures:** the usage of nursery/kindergartens is also a factor which influences thermal comfort choices: weekly PI working hours are generally Monday to Friday from 08:00 to 16:00, with a lower need for comfortable thermal on weekends and holidays, where use of the heat is minimal or not required at all.

**High temperatures:** Kosovo's climate is mostly dry and hot continental from May to September, most days during this period are sunny. The hottest months are July and August with regional variations due to altitude. However, air temperature of 28 ° C will be

the limit for comfortable PI work, where with proper flow of natural air from opened windows and air circulators, these levels can usually be achieved in all teaching classrooms during the school year.

**e. Passive climate control**

Control over penetration and creation of the heat can be naturally minimized with an adequate design of the walls and plastering of the buildings. The source of the heat is sun, so excluding direct sunlight from the interior of the building is essential. As it mentioned, solid external walls can be overlooked as an important source of daytime internal heat within PI. This means that windows are attention-seeking elements. This could be achieved in two ways , **with orientation and sun reflection.** It's worth to be mentioned that the tools for shading the sun inside the glass are ineffective as the material warms up and create reflection on the interior. It is essential to prevent sun to strike the glass, the heat is not reflected outside through the glass because the wavelength is changed and the greenhouses are heated.

**Orientation to the sun:** direction, or the best orientation to have essential daylight in the window is north-south. In Kosovo, the orientation from the North does not directly reflect sunlight by the side of the window, while the orientation from the South reflects minimum radius, in the window below the smallest and narrowest angel during the day: in the warmest part of the day, the sun will be at its zenith and the radiation angle of the windows towards the south will be narrower.

**Inter-ventilation (indirect ventilation)** will be a natural comfort factor for the warmest part of the year but at the highest points there may be more need to vent out the warmed air passing through warm and dry soil. However, buildings with the option of openings on both sides are not economical, although this option is recommended as the most optimal. The preschool institution, like any other construction group, will have a slope of oppression under varying conditions and directions of the wind, so that air circulates through the building from positive and negative pressure to the extent that it is being enable by partitions and interior spaces.

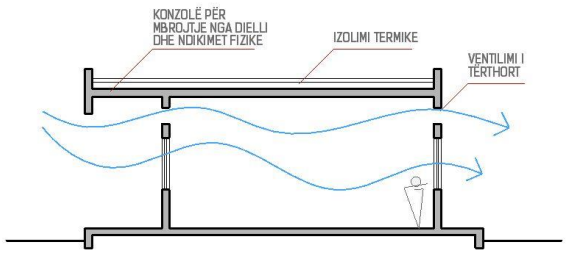



*Figure 21:Indirect ventilation – Flat roof, P+0*

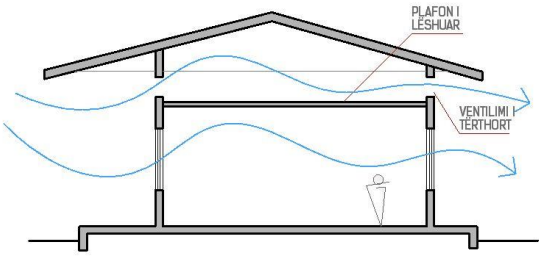



*Figure 22:Indirect ventilation – sloping roof, P+0*

**Sun reflection:** Effective sun reflection devices could be designed to work in any orientation, since the sun angle is fully predictable. However, due to seasonal variation in altitude, excluding sunlight during the year, will require moving elements. In practice, reflection is usually a compromise, although if optimal orientation is designed, the

reflection after being reviewed, will be effective. Assuming the orientation towards the south, the window will be reflected from an outer horizontal shelf at the top level of the window, with a design that depends on the length of year desired to prevent sunlight from entering to the hall or from falling on the window. During the winter time, there will be benefits from sunshine, so the angle of sunshine that should be excluded is from May to October.

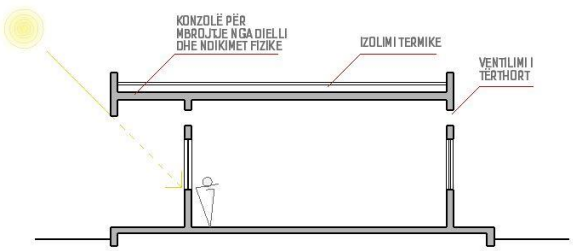



*Figure 23:Sun protection – Flat roof, P+0*

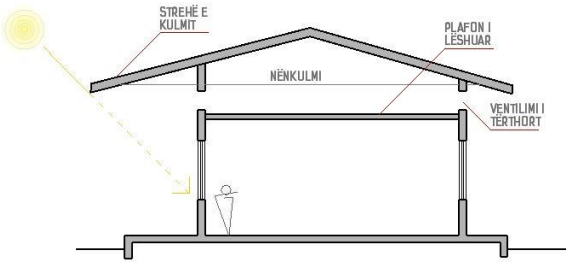



*Figure 24: Sun protection – Sloping roof, P+0*

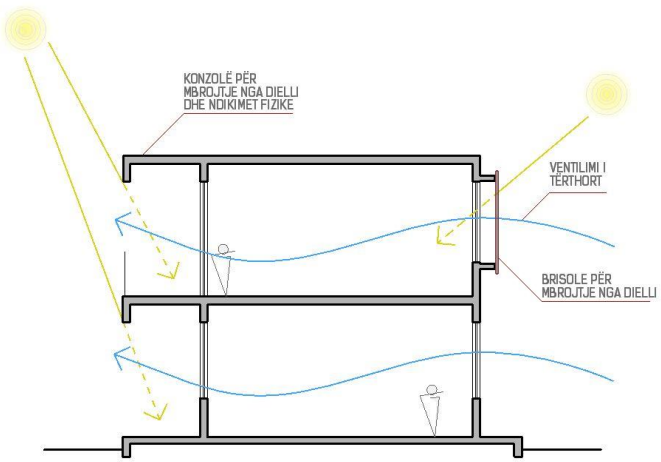



*Figure 25: Sun protection and indirect ventilation – P+1*

## 12.8 Visual amenity

### i. Definitions and terminology

The need for high standards and a well-designed lighting for school buildings is based on: natural lighting resulting from direct or indirect sunlight that is reflected from the ground and other exterior or interior surfaces, artificial lighting from electricity sources (light bulbs, fluorescent tubes); the brightness or intensity of the light whether from a natural or

artificial source, or from any impermeable surface or object that is not transparent; and the contrast of the brightness or color.

**Factors for light reflection**

| No. | Materials | % of light refection |
|---|---|---|
| **1** | Plaster | 85 |
| **2** | White paper | 84 |
| **3** | White coloring | 75 |

| No. | Materials | % of light reflection |
|---|---|---|
| **4** | Cement | 55 |
| **5** | Wood natural substance (light color) | 33 |
| **6** | Red bricks | 20 |

Comparative value of lighting in Luks

| No. | Lighting (luks) | Ndriçimi (luks) |
|---|---|---|
| **1** | Outside, full sunny midday weather | 80,000 to 100,000 |
| | Inside, close to the window in clear sky: | |
| **2** | 0,50 meter from the window | 2,000 to 4,000 |
| **3** | 1,50 meter from the window | 700 to 900 |
| **4** | Working place /bulb 60W 0,60 meter height | 500 to 700 |

Table 7: The reflection of light

**Recommended measures**

Designers should take measures to ensure the comfort of lighting that is essential for good performance and visual comfort of pupils and preschool staff. They are:

**Natural lighting**:

- To limit the use of expensive artificial lighting, the design of the building and classrooms should maximize the use of natural light and thereby to minimize potential radiation that may occur at certain times of the day;
- Good lighting is important in circulation areas to minimize the risk of accidents;
- Distances between the fronts should allow sufficient light to penetrate into the buildings. These recommendations on this type of distance are also applied to climate comfort;
- The number, dimension, placement and arrangement of the windows must be in accordance with the required amount of the light (and airflow). Having in consideration the importance of natural lighting, it is recommended that the entire surface of the windows in the classroom must be 15 to 20% of the floor surface;
- Depth of the halls can affect the natural lighting for spaces on the opposite side of the windows. Therefore, it is recommended to avoid the depths of the halls exceeding 7.00 m;

- In case when we have shelter, window absorbers or bars for windows protection, their effect on daylight should be carefully studied;
- Planting trees and shrubs can limit the intensity of light, depending on the size and shape, as well as types of the leaves and distance from the buildings.

**Artificial lighting:**

- Some nursery and especially kindergarten activities, necessarily require proper artificial lighting, especially during the winter and at the end of the day or during cloudy days.
- The type of lighting equipment that need to be installed, depends on the intensity of the required light and the type corresponding activity. However, fluorescent tubes compared to incandescent light bulbs, have the advantage of low surface reflectivity, high efficiency, good light distribution, low heat output;

## 12.9 Acoustic amenity

**(a) Definitions and terminology**

Before recommending measure to improve acoustic comfort in preschools buildings, terms and notions related to acoustics must be defined.

Voice is a wave of pressure in an elastic medium. If not restricted, it is being transmitted from the source in all directions and the intensity decreases by increasing distance from the source. The sound moves at about 0.344 m/second in the air and at a higher speed in higher density materials such as wood, steel, concrete, etc.

The noise can come from the external or internal sources. The indoor environment could be noisy while children are performing activities, while the outdoor environment is affected by the nursery/kindergarten location.

**The transmission** of sound through any material depends on its density and consistency. In constant materials, such as steel, sound is transmitted at a higher efficiency than in other non-constant devices such as brick wall;

**Sound intensity** is the level of sound energy transmission. This intensity is measured in decibels (dB);

The frequency of sound is the measurement of the number of pressures waves per second produced by this sound. The average human ear responds to 16 to 16,000 frequency waves per second;

**The absorption** represents part of the sound that remains in the material and never gets out of it. The more porous the material is, the higher absorption and structural surfaces are, people or furniture also absorb some of the sound.

**(b) Findings from the prior studies**

The lack of acoustic comfort could come from external or internal sources. The acoustic environment within the PI could be very loud, especially during the time when pupils come in, go out or are active in the multipurpose space. When pupils are in the classroom, there is a need for a controlled level of the sound, so that what is to be heard can be heard clearly. Unfortunately, the traditional layers works and surfaces in many of Kosovo's PI

are solid and reflective, where sound echoes are created and the echo time could be long, although in the classrooms this echo should not be considerable, since we are dealing with different age groups of the children. The children of the kindergarten have separated the classroom from the sleeping area. Sleeping schedule may vary depending on age group, so the acoustic comfort is needed.
There are three sources of undesirable background sounds that need to be checked:

a) From neighboring classroom spaces;
b) From the sources of large noises within the PI, such as workshops, multipurpose spaces and corridors, from playgrounds and outside PI spaces;
c) From other sources outside of the location.

**Recommended measures**
In order to provide an appropriate (acoustic) environment, the following points should be taken into consideration when planning nurseries - kindergartens:

- **Nursery / kindergarten location:** where is possible, a minimal traffic intensity location must be chosen, but in cases where the nursery/kindergarten is located in a noisy location, then vertical green areas should be added in order to limit noise penetration from the outside. (from the markets, highways, stations…).
- **Sound insulation:** measures must be taken to ensure sufficient sound insulation between spaces (cracks, multipurpose space, offices…) to prevent obstructions caused by external or internal noise. Solid material, such as brick wall between any noise source and any teaching activity in the vicinity, will be resulting in decreasing decibels.
- **Materials and techniques:** must be adaptable for noise control between external and internal spaces: use of ceiling-absorbing materials, construction of double outer walls separated by a void filled with insulating materials (polystyrene), flooring of finishing material that helps to reduce the noise, filling joints between pipes and air pipes ... etc.

## 13.0 Design for hygienic environment
## 13.1 Interior sanitary spaces

The quality of the hygienic environment in a nursery/kindergarten depends on the design, selection of the equipment for users, but also on the maintenance and management of the use of such equipments.

### 13.2 Wastewater and atmospheric treatment

There are three types of water that must be treated and removed from the facility: toilet water, bathtub water, shower, sink and water coming form the rain.

Water treatment varies by the place, depending on the availability of the city/village sewage network and the possibility of being connected to the water supply system:

- Nursery/kindergarten locations with public water supply, and sewerage network;
- Nursery/kindergarten locations that have water supply, but are not connected to the sewage system;
- Nursery/kindergarten locations in remote rural areas without water supply;

## 13.3 Sewage pipes

Sewage pipes must respect sanitary and ecological conditions. These parameters must be taken into consideration when installing pipes:

- Free fall of pipes 2-2.5% for atmospheric water and 3-3.5% for wasterwater;
- Minimum diameter of the sewage pipe-100mm, atmospheric water-80mm;
- Pipe joints should be Y-shaped and the straight angles free of pipes should be less than 30 °;
- Each sanitary appliance must have a siphon to eliminate odors;
- All wastewater discharges must be ventilated through a vertical pipe for ventilation.

## 13.4 Water supply and water reservoirs

Water quality must meet the criteria for drinking water. Water usually comes from the water supply, springs, free-fall water supply, or in rural areas by truck transport. The average water supply is based on water consumption per child during the day, but 20-30% of this consumption may increase during the summer season:

- 1.5liter of drinking water for children and personnel;
- 6.0liter for cleaning and toilet/children;

## 13.5 Drainage of the location

Includes post-storm and atmospheric water drainage system. If the location has no natural slope, it must be scaled in that order that all surfaces should be slopping, in distance from the buildings at the minimum rate of 1%. Atmospheric water drainage system and roof drainage should be provided. The roof of the buildings must be designed in such way as to enable drainage of atmospheric waters. Flat roofs should have a minimum slope of 1%, while slope roofs should have gutters and vertical drainage pipes.

## 13.6 Ventilation of the environments

Ventilation of the nursery/kindergarten environment improves the hygiene within the object, eliminating moisture, as well as removing insects which transmit diseases. The ventilation of these facilities could be done by natural ventilation (which uses the wind and air current bringing inside fresh air), and mechanical ventilation (bringing fresh air through ventilators, pipes, air conditioners).

## 13.7 Heating

When calculating heat for the buildings that are naturally ventilated, consideration should be taken to air replenishment at 2 volumes per hour. Activity space temperature minimum 18 ° C and maximum 26 ° C. Under the heating system there should be a storage room for the boiler.

## 13.8 Ventilation

As preschools environments are high-density of children and taking into consideration their immune system, the ventilation system is of great importance and requires special care. Ventilation could be done with: Natural ventilation and mechanical/artificial ventilation.

## 13.9 Hot water

The temperature of hot water for children should not exceed 48 °C.

## 13.10 Security

Precautions should be taken for limiting risks of the accidents, fire and bodily injury in nurseries/kindergardets. The following precautionary measures regarding the risk weight should be considered:

- Placement of the building and location plan;
- Lighting of the environments and outdoor spaces;
- Quality of construction materials, colors and equipments;

## 13.11 Accidents

The measures that planners of preschool buildings should take on prevention from the accidents and injuries relate to the following aspects:

- Location of the preschool facility and its accessibility;
- Circulation components;
- Planted areas;
- Technique and construction materials;

## 13.12 Fire protection systems and rules

Precautions that should be taken by the planners include limiting of fire hazards, facilitating evacuation, and rescue teams access. The nursery/kindergarten should be located as far away as possible from areas that produce fire hazard. The access road to the building must be at least 8 meter wide and must be suitable for the vehicles and trucks including ambulances and fire brigade vehicles.

**Ways out methods:**

- Classroom-emergency exit distance must be less than 30 meter;
- Capacity of outgoing people in case of fire 50 persons/floor;
- The corridors should be wide enough to allow quick evacuation of minimum 150 cm and less than 23 meter in length, with no exit (top) corridors smaller than 6.1 meter;
- Doors should be minimum 95cm wide and double security doors minimum 1.50 meter and should open from the inside out;
- In case of a high-rise nursery/kindergarten, special rooms should be placed to facilitate the evacuation of children in emergency cases[24];
- An evacuation bed/4 children of 0-18 months (55kg) placed in the bedroom, near to the exit[32]; dimensions of the bed 125x70cm[33];

The setting of fire alarms will help quick exit of people, as well as the placement of signs and alerts for the identification of exit routes, finding fire extinguishing equipment, etc.

[24]Manual of standard building specifications, 2011, Europian Commission, office for infrastructure and logistics Brussels

## 13.13 Destruction over time and natural disasters

**a) Destruction over time**

Provisions should be foreseen for limiting the risks of damage and destruction of the buildings and equipment, as the lack of safety measures can reduce the convenient duration of both and/or cause expensive repairs. Two main causes of breakdown, besides downgrading, are weather and various biological agents.

- **Weather:** climatic factors have a serious impact on preschool buildings if not treated carefully at the design stage, in particular on external features such as insulation, waterproofing, roof drainage, door and window positioning, ledges and window shelters, etc.
- **Biological agents:** certain insects, such as termites, ants or spiders, small animals, such as birds and rodents, and mushrooms resulting from a combination of darkness, heat and humidity are degrading factors for the buildings, materials and equipment, and cause reduce of the convenient duration of preschool buildings. In addition, these agents have harmful effects on the health, safety and amenity of the children.

b) **Protection against destruction**

Includes simple measures that can be easily incorporated during the design and construction phases. These measures include:

- Cleaning facility before the construction begins;
- Use of termite-resistant materials (wood) and to rust (metal);
- Selection of solid and cleanable upper surfaces;
- Treating wood elements with products against mushrooms and insects;
- Closure or protection of all spaces that may allow access of animals and insects (nodes, pipes, ventilation openings, etc.);
- Good ventilation and natural lighting of warehouse areas to prevent mushroom growth;
- Rigorous tightening of pipes to avoid leakage and accumulation of water that may attract animal and insects;

**c) Earthquakes**

This paragraph addresses foreseen conditions for preserving the integrity of nursery/kindergarten building structures when it is subject to a medium or high intensity earthquake. Normally, in accordance with building codes and regulations, structures must be designed to “withstand” the largest earthquake to be expected to occur at a given location. This means that the loss of lives and the property should be minimized by preventing buildings from collapsing. Usually, **seismic design conditions** are determined depending on the site regulations where the project is being implemented and its authorities which determine the applicable seismic design codes and criteria. However, the norms and recommendations for seismic design of the buildings are not yet defined in

Kosovo, although the site is within a seismic zone, while construction sector professionals are relying on the norms defined by earlier laws or foreign countries, mainly EU and OECD countries and / or the United States of America.

**d) Thunder protection**

Thunder protection system is an important protective measure that PI designers should consider. The system is designed to protect buildings and their contents from damage due to collisions, interrupting them and safely transmitting their high voltage currents to the ground.

**e) Flood protection**

Flood and landslide protection begins with proper site selection that does not contain any risk, or minimal risk of flood or landslide, and this can be supplemented by specific measures which are adapted to each location, based on local surveys and soil tests with number, depth, and adequate location of soil drilling.

However, if the PI location is in an "area A" (near a river, stream or lake), and the projected lower floors are below the basis of rise of the flood, the best protection way against the damage caused by flooding is to raise buildings so that the lower floor is even, or to be over the basis of flooding. The designer can also take these measures to avoid or mitigate flood damage in an area such as: Water-resistant building materials may be used in areas below the basis of rise of the flood, or sowing plants and traditional vegetation that protects the soil from erosion etc.

## 13.14 Maintenance

Maintenance of the physical buildings is a universal problem and considering this problem at the design stage is of vital importance. In the early stages of designing any building, in addition to the amount of space needed, the desired duration of the building and the amount of money that will be spent, both for overall spending and maintenance. When preparing the design, decisions must be taken as to the capital expenditure, as to the annual repair and replacement cost, as well as the final duration expected for a building. It should be clearly understood that lower commencement cost is no longer economical and long-term, as many cheap materials require much more maintenance and may have a shorter life than others that are more adequate, but are more expensive alternatives. For example, this is especially true for completed walls and floors that are subject to cost and constantly pang.

## 13.15 Furnitures and equipment

Planning and designing preschool facility furniture and equipment is not part of these general guidelines, but as their features and dimensions play a major role in determining dimensions and in configuration of rooms, it is necessary to pay attention to their dimensional aspect as an element of the design of the building, especially for defining the dimensions of the rooms and the surface area, whereabouts and dimensions of the doors and windows ... etc.

## 13.16 Dimensions of the furnitures

Current dimensions of preschool furniture are based on previous surveys of developed and neighboring countries. In our case, we got those from Italy.

Anthropometric measures taken by standards[25]:

| | 1-3 years | 3-5 years |
|---|---|---|
| **Eye level (sitting position)** | 480-680mm | 680-750mm |
| **Eye level (standing position)** | 670-810mm | 810-970mm |

Standard dimensions of seats and desks for children[26]

| No | Children's age | Table's height | Seat's height |
|---|---|---|---|
| **01** | 1-4 years | 50.8-55.88cm | 25.4-30.48cm |
| **02** | 5-7 years | 55.88-63.5cm | 30.48-35.56cm |

***Table 4: Standard seats dimension***

## 13.17 Windows and doors

**a. Windows**

The penetration of natural light into the interior, the free visibility from inside to the outside of the building and free visibility throughout the entire building are very important elements in children environments.

There should be a window: on the perimeter walls, between the walls of the classrooms, on the circulation streets. Both, children and adult caretakers must be considered to meet these requirements. Consideration should be given to elements such as height and window frames, glass type, visual clarity (not to be blocked horizontally, neither by the adults nor by the children), light control, and safety factors. The designer should try to plan at least one exterior window for the classroom. In case where this is not possible, the design shall provide the best penetration of light and the visibility through latrines, side windows, windows and doors with glass (safe). The openings related to the floor should be (orientally) 1/6 of the floor surface. **Children's spaces in new construction should have a total surface with windows at least:**

- 8% of floor area if windows are from the south and are directly connected to the outside environements;
- 10% of the room surface if windows are oriented towards east or west;

[25] https://www.gsa.gov/cdnstatic/designguidesmall.pdf
[26] Po aty.

- 15% of floor area of the room if the windows are facing to the north;
- 20% of the room surface if the windows are not on an external wall.

***The windows parapet should be at least:***

- 450 mm from floor level for infants
- 600 mm from floor level for children of age 1-3 years
- 750 mm from floor level for kindergarten children.

Windows with a parapet at height of less than 900 mm above the floor level should be static. Where these windows have an opening mechanism, the outer protective fence with a minimum height of 900 mm(for nursery and kindergarten that extend up to two floors) shall be provided. The fence should be designed in such way that it does not produce riskiness for children, it should not have horizontals, while the distance between the verticals should be less than 10 cm.

Surfaces that do not need windows are toilets, kitchen areas, technical areas, administrative spaces and slim.

**b. Doors**

Doors connect two different of nursery/kinergarten spaces. Consideration should be given to: size, material, colors, working mechanism, etc. Door handles should be suitable for all users including persons with special needs. Doors should have handles that can be used on both sides, with the components having smooth edges. Doors should be opened from inside-out. At a height of 600-1000 mm, there should be transparent material that allows children view at the other side. It is preferable to be glass with plastic property, shock resistant and transparent.

All doors that are used for evacuation must be minimum 915mm wide[34]. All doors that are used by children must have handle at height of 750mm from the floor level, doors that are used only by adults have handle at height of 1500mm from the floor[35.]

SPECIAL REQUIREMENTS

# 4

# 14.0 SPECIAL REQUIREMENTS

## 14.1 Design of the spaces for people with special needs

Designing preschool buildings should ensure unhindered access, movement, staying and learning of children with special needs. Ministry of Environment and Spatial Planning on 18.06.2007 approved the Administrative Instruction on "Technical conditions of constructed facilities for access of people with disabilities" therefore, planners should rely in this instruction, but also in this guide more specific technical conditions for preschool buildings will be summarized.

People with special needs could be children, guests or staff. The main problem of their movement is reduced because they use wheelchairs, crutches or walking sticks. This problem requires the particular dimension of circulation areas, door spaces, sanitation equipment, evacuation paths and classrooms areas for accommodating people with special needs. The dimensions of people with special needs through the wheelchairs should be taken into consideration by the planners when determining the size of PI space and circulation. Wheelchairs have different dimensions, depending on the age of pupil and the type of item. However, the following dimensions coincide with the average dimensions of adults, which must be taken into consideration:

- Generally the width of the chair is between 600 and 700 mm;
- Lentgh is between 1000 and 1250 mm;
- Outer radius is between 1300 and 1500 mm;

***The space where people with special needs arrive with wheelchairs is defined as follow:***

- Between 230 and 300 mm above the floor level;
- Between 1100 and 1300 at height;
- Between 300 and 400 mm aside of the chair;


***Figure 25: Children with special needs***

The design of new facilities must take into consideration children with special needs. This have to do especially for dimensioning elements such as doors and the distances between different elements such as furniture and the other equipment

## 14.2 Access to exterior spaces and buildings

### (a) Outer circulation

The entrance to the nursery/kinergarten courtyard from the street should be without stairs. Special car parking with a larger space at one side (3.80 meter than 2.5 meter wide) should be foreseen for the vehicle.
The boundaries of pedestrian paths should always have intersecting edges and pedestrian spaces should always be separated from vehicle traffic by paving stones (blocks). The paths must comply the required minimum width of 1.5 meter for a standard wheelchair, the area for return and floor coverings must be made of not slippery materials and to be free from obstacles of easy movement.
• Curved slope on the walkway should not be more than 1:12 or 5% and the long slopes should be phased out. Pavements should have a minimum width of 0.90 meter if planned for one direction and 1.80 meter for both sides. The signaling must be visible and constant rationalist. Access to all buildings should be accessible to the people with special neeeds, preferably with platforms, the slopes of which shall not exceed 1:12 (5%), with a flat resting place after every 9 meter of platform length;
• All the crossings in the playgrounds and sports fields should be planned with platforms whenever necessary. The final part of these platforms should be made of not slippery materials such as concrete blocks, stones or asphalt. Platforms must be equipped with a side banister and/or sidewalk brick along the length of the platform;

### (b) Interior spaces

- The main entrances of the buildings must be clearly recognizable, easy to open and simply to pass through;
- Doors thresholds should be avoided or to be having a maximum height of 20 mm and automatic doors to be applied;
- In classroom spaces, the 1.5 meter diameter workspace should be kept free and unloaded so that the wheelchair of the children with special needs can be turned and positioned in front of the desk;
- In case of the object with 2 floors elevator (s) should be placed near to the entrance of the building, the elevator space should be large enough for the wheelchairs of the children with special needs, while signs and control should be accessible from the persons with special needs. Elevator booths should also include signage such as: Braille alphabet, acoustic and visual call reception and floor voice alert.

## 14.3 Sanitary and electrical equipment

The power buttons and controllers shall be large and located at a height of 0.8 to 0.9 meter. Special attention must be taken for people with special needs, for their easy access to the taps and sinks located at a hight of 700 to 800 mm. Low type toilets should be supplemented with vertical metal handrails placed aside and slightly to the front of the toilet. Each nursery/kindergarten should have a toilet for the children with special needs in special dimensions (1.70 x 1.70 meter) with a fairly wide door (1.0 meter) and a secure metal handrail safely placed.

PLANNING TASK

# 15.0 PLANNING TASK

**COMBINED PRESCHOOL INSTITUTION**

| | | | | |
|---|---|---|---|---|
| PROJECT NAME: | MUNICIPALITY: PRISTINA | CADASTRAL AREA: PRISTINA | PARCEL: 01-234 | QUARTER: "KALABRI" |
| PLAN: PRRH | ISHPKZH: 30 % | CAPACITY: 60 CHILDREN | NURSERY: 24 KINDERGARTEN:36 | FLOORING: P+1 |

**URBAN CRITERIA:**

| | |
|---|---|
| 1. Within the parcel should be ensured: | 25-30 $m^2$/children |
| 2. Gross /constructed area per 1 child should: | 11 $m^2$/child |
| 3. Playground per 1 child should: | 7 $m^2$/child |
| 4. Location must have sufficient parking space: | 1PV/100 $m^2$ |

In cases when public park is within 110-230 meters from PI, it is not neccessary to provide children's playground nor sportive, within the institution.

**NURSERY/KINDERGARTEN SPACES:**

**Age groups of children**

| AGE | NUMBER ACCORDING TO THE AGE-GROUP | NUMBER OF EDUCATORS IN REPORT WITH NUMBER OF CHILDREN. |
|---|---|---|
| **9 Months to – 2 years** | **8 UNTIL 12** | **2:10 / 2:12** |
| **2- 3 years** | **12 UNTIL 16** | **2:14 / 2:16** |

| **Total** | **PRESCHOOL INSTITUTION FOR 60 CHILDREN** | |
|---|---|---|
| | **Minimum 2000 $m^2$** | **$m^2$/children** |
| **Location/Parcel** | 25-30 $m^2$ /children<br>ISHPKZH nursery:30 % ISHPKZH kindergarten:25 % | 30.39 |
| **Flooring** | P+0 : P+1 | (Total) |
| **Yard** | 7.0 $m^2$ / child | 420 |
| **Parking area** | 1VP/ 100 $m^2$ of gross constructed area | 118.65 |
| **Playgrounds/daily activities** | 2.3 $m^2$ / child | 138 |
| **Terrace** | 15$m^2$ / group | 80.00 |
| **Object** | 11$m^2$ / child | 791 |

| | | | |
|---|---|---|---|
| **Other spaces** | 10-13% of the total | | 275.86 |
| | | | **1823.51** |

| **Room /Function** | **Measuring parameters** | **Number of chlidren:** | **Square areas ($m^2$)** |
|---|---|---|---|
| **Urban criteria** | | 60 | 791 |
| **By number of inhabitants** | Nursery- 0.3$m^2$ /inhabitant<br>Kindergarten-1.0 $m^2$ /inhabitant | | |
| **Optimum service radius:nursery buildings** | Rural residence 300 m<br>Urban residence 300 m<br>Rural residence 900 m<br>Urban residence 500 m | | |
| **Distance from fire hazardous locations** | 150 m | | |
| **Distance from industrial buildings** | 800 m | | |
| **Exterior spaces** | | | |
| **Location/Parcel** | Minimum 2000 $m^2$<br>30 $m^2$ /children<br>ISHPKZH nursery:30 % ISHPKZH kindergarten:25 % | | 2000 |
| **Flooring** | P+0 : P+1 | | |
| **Yard** | 7.0 $m^2$ / child | | 420 |
| **Parking area** | 1VP/ 100 $m^2$ of gross constructed area. | | 7.91 |
| **Playgrounds/daily activities** | 2.3 $m^2$ / child | | 138 |
| **Terrace** | 15$m^2$ / group | 1.33 | 80.00 |
| **Fence** | H=1.25meters<br>H= 2.44 m – high-risk neighborhoods | | |
| **Interior spaces** | | | |
| **Entrance and children admission** | 10 $m^2$ / each entrance<br>Children admission=4 $m^2$ / each group | | 12 |
| **Multi-purpose space** | 80$m^2$ / for 4 goups<br>For each new group increases 10$m^2$ /for group<br>In case when PI has more than 2 groups | | 60 |
| **Classroom** | 4 $m^2$ / child | | 240 |
| **Bedroom** | 2$m^2$/nursery child | | 80 |

| | | |
|---|---|---|
| **Infant chairs storage** | 0.2 $m^2$ / child | 12 |
| **Children's wardrobe** | 1$m^2$ / child | 60 |
| **Properties storage** | 6$m^2$ / for 4 groups | 4.5 |
| **Storehouse of teaching material** | 0.2 $m^2$ / child | 12 |
| **Children's toilets / hygiene services:** | 0.39 $m^2$ / child | 23.4 |
| **Diaper exchanging storage** | 3+0.33$m^2$ / child | 7.92 |
| **Room for milk** | 16 $m^2$ | 16 |
| **Kitchen** | 0.28-0.43$m^2$ / child<br>Or: 0.4$m^2$ / for meals | 16.8 |
| **Dining table** | 0.4 $m^2$ /child | 24 |
| **Corridors** | 10-15% of overall areas | 79.1 |
| **Administrative spaces** | | |
| **Director's office** | 15 $m^2$ | 10 |
| **Office of the secretary** | 6 $m^2$ / PI more than 75 children | |
| **Space for parent-educators meetings** | 12 $m^2$/100 children | 10 |
| **Office of the pedagogue/psychologist** | 8 $m^2$/PI more than 12 groups/ nursery over 6 groups | |
| **Pediatrician's office** | 10 $m^2$ | |
| **Infirmary** | 10 $m^2$ | 10 |
| **Toilets and staff wardrobe** | 10 $m^2$ | 10 |
| **Technical spaces** | | |
| **Technical heating rooms** | 40 $m^2$ | 40 |
| **Boiler depot** | 6 $m^2$ | 6 |
| **Raw material depot** | 50 $m^2$ | 20 |
| **Vegetables depot** | 20 $m^2$ | 20 |
| **Dishwashing room** | 30 $m^2$ | |
| **Laundry room** | 0.11 $m^2$/per child | 6.6 |
| **Depot for cleaner's materials** | 10 $m^2$ | 10 |
| | | **790.32** |

**COMBINED PRESCHOOL INSTITUTION**

| | | | | |
|---|---|---|---|---|
| PROJECT NAME: | MUNICIPALITY: PRISTINA | CADASTRAL AREA: PRISTINA | PARCEL: 01-234 | QUARTER: ”KALABRI” |
| PLAN: PRRH | ISHPKZH: 30 % | CAPACITY: 200 CHILDREN | NURSERY: 80 KINDERGARTEN 120 | FLOORING: P+1 |

URBAN CRITERIA:

| | |
|---|---|
| 1. Within the parcel should be ensured: | 25-30 m2/child |
| 2. Gross /constructed area per 1 child should: | 11 m2/child |
| 3. Playground per 1 child should: | 7 m2/child |
| 4. Location must have sufficient parking space: | 1VP/100 $m^2$ |

5. In cases when public park is within 110-230 meters from PI, it is not neccessary to provide children’s playground nor sportive, within the institution.

**NURSERY SPACES:**

**Age groups of children**

| AGE | NUMBER ACCORDING TO THE AGE-GROUP | NUMBER OF EDUCATORS IN REPORT WITH NUMBER OF CHILDREN. |
|---|---|---|
| **9 Months – to 2 years** | **8 UNTIL 12** | 2:10 / 2:12 |
| **2- 3 Years** | **12 UNTIL 16** | **2:14 / 2:16** |

| **Total** | **PRESCHOOL INSTITUTION FOR 200 CHILDREN** | |
|---|---|---|
| | Minimum 2000 $m^2$ | $m^2$/child |
| **Location/Parcel** | 25-30 $m^2$ /child<br>ISHPKZH nursery:30 % ISHPKZH kindergarten:25 % | 24.21 |
| **Flooring** | P+0 : P+1 | (Total) |
| **Yard** | 7.0 $m^2$ / child | 1400 |
| **Parking area** | 1VP/ 100 $m^2$ of gross constructed area | 318.3 |
| **Playgrounds / daily activities** | 2.3 $m^2$ / child | 460 |
| **Terrace** | 15$m^2$ / gorup | 266.67 |
| **Object** | 11$m^2$ / child | 2122 |

| | | | |
|---|---|---|---|
| **Other spaces** | 10-13% of the total | | 275.86 |
| | | | **4842.83** |

| **Room /Function** | **Measuring parameters** | **Number of chlidren:** | **Square areas ($m^2$)** |
|---|---|---|---|
| **Urban criteria** | | 200 | 2122 |
| **By number of inhabitants** | Nursery- 0.3$m^2$ /inhabitant<br>Kindergarten-1.0 $m^2$ /inhabitant | | |
| **Optimum service radius:nursery buildings** | Rural residence 300 m<br>Urban residence 300 m<br>Rural residence 900 m<br>Urban residence 500 m | | |
| **Distance from fire hazardous locations** | 150 m | | |
| **Distance from industrial buildings** | 800 m | | |
| **Exterior spaces** | | | |
| **Location/Parcel** | Minimum 2000 $m^2$<br>30 $m^2$ /child<br>ISHPKZH nursery:30 % ISHPKZH kindergarten:25 % | | 6000 |
| **Flooring** | P+0 : P+1 | | |
| **Yard** | 7.0 $m^2$ / child | | 1400 |
| **Parking areas** | 1VP/ 100 $m^2$ of gross constructed areas | | 21.22 |
| **Playgrounds/daily activities** | 2.3 $m^2$ / child | | 460 |
| **Terrace** | 15$m^2$ / group | 1.33 | 266.67 |
| **Fence** | H=1.25m<br>H= 2.44 m – high-risk neighborhoods | | |
| **Interior spaces** | | | |
| **Entrance and children admission** | 10 $m^2$ / each entrance<br>Children admission=4 $m^2$ / each group | | 40 |
| **Multi-purpose space** | 80$m^2$ / For 4 groups<br>For each new group increases 10$m^2$ /for group<br>In case when PI has more than 2 groups | | 200 |
| **Classroom** | 4 $m^2$ / child | | 800 |
| **Bedroom** | 2$m^2$/nursery child | | 80 |

| | | |
|---|---|---|
| **Infant chairs storage** | 0.2 $m^2$ / child | 40 |
| **Children's wardrobe** | 1$m^2$ / child | 200 |
| **Properties storage** | 6$m^2$ / for 4 groups | 15 |
| **Storehouse of teaching material** | 0.2 $m^2$ / child | 40 |
| **Children's toilets / hygiene services:** | 0.39 $m^2$ / child | 78 |
| **Diaper exchanging storage** | 3+0.33$m^2$ / child | 7.92 |
| **Room for milk** | 16 $m^2$ | 16 |
| **Kitchen** | 0.28-0.43$m^2$ / child<br>Or: 0.4$m^2$ /for meals | 56 |
| **Dining table** | 0.4 $m^2$ /children | 80 |
| **Corridors** | 10-15% of overall areas | 212.2 |
| **Administrative spaces** | | |
| **Director's office** | 15 $m^2$ | 15 |
| **Office of the secretary** | 6 $m^2$ / PI for more than 75 children | 6 |
| **Space for parent-educators meetings** | 12 $m^2$/100 children | 20 |
| **Office of the pedagogue/psychologist** | 8 $m^2$/PI more than 12 groups/ nursery over 6 groups | 8 |
| **Pediatrician's office** | 10 $m^2$ | 10 |
| **Infirmary** | 10 $m^2$ | 10 |
| **Toilets and staff wardrobe** | 10 $m^2$ | 10 |
| **Technical spaces** | | |
| **Technical heating rooms** | 40 $m^2$ | 40 |
| **Boiler depot** | 6 $m^2$ | 6 |
| **Raw material depot** | 50 $m^2$ | 50 |
| **Vegetables depot** | 20 $m^2$ | 20 |
| **Dishwashing room** | 30 $m^2$ | 30 |
| **Laundry room** | 0.11 $m^2$/ per child | 22 |
| **Depot for cleaner's materials** | 10 $m^2$ | 10 |
| | | **2122.12** |

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