

# ESSENTIAL CRITERIA FOR BUILDING SPORTS BASES IN THE CONTEXT OF RURAL POPULATION HEALTH

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**Abstract:** *The sports base is any special construction or arrangement, permanent or temporary, together with the necessary social and sanitary annexes and provided with the equipment corresponding to the physical activity. This article is based on the presentation of the essential criteria to be taken into account for the development of a sports base. Another aspect of the research is that of the population's opportunity to use these spaces by practicing various physical activities in order to maintain an optimal level of health.*

**Keywords:** *physical education, sports grounds, population.*

## 1. Introduction

The sporting base is the special construction or fitting out for practicing sport and exercise [8].

The purpose of the research is to highlight the importance of the most relevant criteria for setting up sports facilities in rural areas.

In Hu et al., 2016, the influence of globalization on sport has proven to be an issue widely discussed by researchers and improving the sustainability of this issue is an important issue for all the systems involved. Thus, little is known about the effectiveness of community-wide interventions to increase physical activity

and whether the effects differ from the socio-economic group (Higgerson et al., 2018).

Sports basics are divided into two broad categories: *open sports grounds*, where activity is usually limited to the season (sports grounds, ski slopes, stadiums, etc.); *closed sports grounds* (halls, swimming pools, etc.), which allow sports activity throughout the year.

Depending on the size of the activity, there may be: simple sporting bases for a single sport and complex sports grounds for practicing more sports.

Within the sports facilities, the facilities are divided into:

1. *Basic layouts* where exercise and sports are practiced: hall, ground, etc.;

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2. *Auxiliary administrative arrangements* that ensure the material conditions: warehouses, workshops;

3. *Auxiliary sanitary fittings*: wardrobe, changing room, showers, WC, medical cabinets [9].

The design and execution of various community sports facilities will contribute to the possibility of physical activities by citizens and thus to combat all the negative factors as such:

- The state of health of the population, especially the young population, highlights alarming increases in the rate of morbidity, sedentariness and obesity, especially as factors favoring the occurrence of various physical and mental disorders;
- The outlook for poor health and the diminishing of the population's driving capacity jeopardize sustainable economic development and national security;
- Diminishing the perception of physical activity for certain categories of individuals and the time allocated to them;
- Alarmingly reducing the number of children and young people practicing sport in different forms [10].

## 2. Directions in Developing and Implementing the Strategy

The implementation of the local development strategy is a complex process that, in addition to providing development directions within the strategic document, also involves an effective implementation of proposed measures and actions.

Successful implementation of this strategy involves following directions (Table 1).

Table 1  
*The Strategic Objectives of Research*

Directions	Strategic results
Developing sports infrastructure	Benefits for the health of the population
Lack of facilities for physical activities (park, sports ground).	Rehabilitation of local sports complexes.
The social role of sport	Supporting local government institutions in creating conditions for practicing sport for citizens in order to improve their health.

## 3. Requirements for Setting up and Guiding Open Sports Grounds - Football Field

The following factors must be taken into account in setting up the sports base:

- 3.1. Choosing the location of the land;
- 3.2. The proper arrangement of the sports base;
- 3.3. Orientation of sports bases.

### 3.1. Choosing the location of the land

Choosing a location is not an easy task because many different factors have to be taken into account. In fact, all variables and criteria for the placement will have a direct impact on stadium design [15].

Emphasis is placed on identifying the following factors:

- a. *Geomorphology of the region* - localities included in the territory (Table 2).
- b. *Climate data* - the area is temperate continental with mountainous influences, with heavy winters, shorter and cooler summers, with varying rainfall that fall all year round and with irregular winds. Annual average

temperatures are around 4°C and a the annual amplitude of 17-19°C;

Table 2  
Territory statistics and number of inhabitants, as per population at 01.07.2010 and total area [12]

Code	Common	No.	Territory km <sup>2</sup> (fig.1)
40633	Bran	5362	67.85
41471	Moieciu	4693	94.91
40991	Fundata	806	36.81

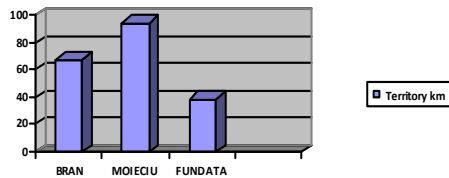


Fig. 1. Graphic representation of the territory / km<sup>2</sup> / commune

- c. *Demography* - In the Moieciu commune, according to data provided by the National Institute of Statistics, at the end of 2011, there were 4,702 persons, out of which 2,372 men and 2,330 women, representing a balanced distribution of the population in terms of gender. The population of Moieciu represents about 3% of the rural population of Brasov County [13].
- d. *The topographic survey* - is done with the purpose of delimiting and determining the land pitching. "The topography or physical characteristics of the location are very important. The ideal location is a spacious, planted space that does not require major earthworks, which may be expensive. If there is any slope, the requirements for filler elements and supporting walls must be identified"[15];

- e. *Existing situation of utilities and its analysis* - adjacent to the location there must be water and electricity supply networks that will not be affected by the proposed modernizations;
- f. *Site resistance structure*.

### 3.2. The proper arrangement of the sports base

The football field is always a rectangular surface that must have some standard dimensions for the unfolding of this very popular sport throughout the world [Ungureanu & Prisecaru, 2013].

According to regulations, the length of any soccer field for official matches must be between 100-110 meters and its width must be between 64-73 meters. The football field has the UEFA dimension: 105x68m.

The playing surface of the natural turf will be performed according to the provisions in force. It consists of: a vegetation layer with sowing lawn, drained gravel compacted soil.

The land drainage slope will be 1%. Markings and gates will be executed in accordance with NP-2002 [11].

"There must also be an edge (of natural turf or synthetic turf), of a minimum width of 1.5 meters, which encircles the whole perimeter of the playing surface.

These dimensions are currently accepted worldwide and should be considered as mandatory.

According to UEFA and FIFA [15] requirements, there must also be an outer surface perimeter of the playing court, between its edge and the first row of seats.

There is additional information on regulatory distances, but the general principle is that the public is allowed to be as close to the point as possible, but far

enough to ensure the safety and free movement of players and match officials.

In practical terms, this means there must be a space of about 7.5 meters behind the gate line and 6 meters behind the edge lines.

Thus, the minimum required floor area for the playground and the surrounding area, up to the first row of seats, is 120m x 80m.

On the side of the stadium on which the locker rooms are located, the outer perimeter must include two reserve benches, an area for match officials, a reserve heating area and media area.

The other three sides of the terrain must include spaces for billboards, television cameras, photographers and security staff.

For the outer surface of the playground perimeter artificial grass can also be used. This avoids the problem of damage to the lawn along the lines of inducement caused by assistant referees or by reserve players during heating.

Changing rooms must be functional and well designed.

For official UEFA competitions, the locker rooms of the host and visitor team must be equipped with the same facilities.

The area of showers and bathtubs must be located near the main space to be changed.

In addition, there must be separate toilets with WC. If the budget allows, the changing room complex can also include additional facilities, such as saunas, Turkish baths and swimming pools. Wardrobes must have direct and easy access to the playing field through the tunnel.

In the case of large or medium stadiums, it may be advisable to provide additional locker rooms for other uses, for example: community sports events or concerts. They can be smaller in size and contain

fewer amenities than the main changing rooms "[15].

### **3.3. Orientation of sports bases**

"The orientation of the open sports and recreation bases is made with the long axis in the north-south direction and the ones closed with the long axis in the East-West direction. If the sporting base is located in regions with strong dominant winds, the orientation of the open and recreational sports base shall be such that the dominant wind strikes perpendicularly on the long axis of the ground "[14].

"To determine the orientation of the football field, the main aspect to be considered is its position in relation to the predominant sun and wind. It is very important that any possible deviation from the north-south direction be as small as possible if the land is not covered.

In such cases, the general rule is that the deviation is not more than 15° to the north-south axis "[15].

## **4. Sustainable Architecture used to Maintain the Health of the Population**

Of the total resident population, 76.6% consider that they have a good health status. Most young people declared good and very good health, but only 31.6% of 65-74 year old and 14.2% of people aged 75 years and over said they had a good health status (figure 2). On the average, there are no significant differences with respect to the declared state of health [18].

Promoting the sustainable design of the football field contributes greatly to the physical activity of the rural population. This aspect is either performance sports, in Moieciu commune, there is a football

team ranked in the fifth league [16] and the table football.

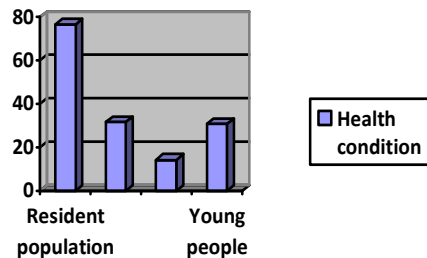


Fig.2. *Systematization of the state of health by age categories*

The concept of sustainable architecture emphasizes the need for people to practice physical activity, encourage social interaction, and thus is considered an integral feature of any sustainable design that aims to optimize the health of the population.

"As the game is a continuous activity, football is excellent for fitness and cardiovascular health. Football can be played by people of different ages and levels of skill.

Football can also be a great sport for children who do not have high levels of athletics but who would like to participate in team sports. Soccer is ideal for boys, girls, men and women who play the same game according to the same rules and in which they can physically cope"[17].

Advantages of football:

- contribute to increasing aerobic capacity and cardiovascular system;
- contributes to body modeling simultaneously with muscular toning [8];
- is generally a non-contact sport;
- promotes teamwork;
- helps to increase abilities in concentration, persistence and self-discipline;
- it's a wonderful way to meet people and exercise your friends;

- can provide an opportunity to increase self-confidence and self-esteem and help reduce anxiety;
- improves physical condition - promotes physical index growth, harmonious and complete body development;
- contributes to the correction and prevention of physical deficiencies [9], [12];
- eliminates sedentariness [13];
- requires very little equipment so it can be played in the yard or park.

#### 4. Discussion

Practicing physical activities in specially designed spaces contributes to optimizing the individual's biological and psychological potential in order to increase the quality of life [10].

The primary objective of land modernization is to be an integral part of the community or area where it is located. Therefore, "plans and proposals for a new or refurbished stadium must maximize the benefits and value offered to the local community by optimizing facilities for residents or acting as a catalyst for regeneration at local level" [15].

#### Conflicts of interest

The author confirms that this article is an integral part of the achievement of the objective according to the contract no.39/19.07.2018.

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