

## **GREEK BEACH RACKET / V.R.**

### **GENERAL RULES OF THE GAME / 2020**

#### **BRIEF HISTORY**

The sport of Greek beach racket named “Valetudo Racket” with the initials V.R., is the sporting representation of the recreational past time, “beach racket” that is played on the beaches in Greece. The dynamic nature of the sport, which is its main feature, does not in any way inhibit the philosophy of competitive sport but aims to improve the physical and psychological wellbeing of the participant. Its creator and inspirer is Elias (Lakis) Zois, who held the first Beach Racket tournament in our country in 1997 in Asteria Glyfada under the roof of "Leo Burnett" and sponsor "TDK" in the context of the world track and field championship "ATHENS '97 ".

In 2001 after thorough research, he was the first to realize that through technology one would be able to measure the speed of the ball when hit with the racket. This was achieved by installing equipment that would not only measure the velocity of the ball but could also detect the amount of times the ball is exchanged between both players. Then through contrived effort together with other people who were interested in the sport they initially started manually recording the velocity of the ball via a computer, which would “beep” when the velocity was over a certain speed. However, for various reasons, this system did not live up to their expectations and “Zois” proceeded to search for something more credible.

A few years later, his dream came true with the addition of Doppler (radar) technology, a piece of equipment designed for measuring the velocity of the ball used in the sport of tennis. This proved to be the most reliable means of the measuring the velocity of the ball and was also economical and functional in terms of transportation.

The current rules and the means of measuring the velocity with the use of the radar are documented by the following patented notations:  
5876/6136/6509/6565/6618/6798/6905/6922/7501/7510/8308. All the above patents are the intellectual property of Elias (Laki) Zoi, formulated by Georgios Chrysochoidis and Nikolaos Skordos.

Starting in mid-2011, “Valetudo Racket” tournaments using the Doppler (radar) technology as a means of measurement were the first of their kind. No other example for a period of two years since the conception did others use radar technology to measure the velocity of the ball and use this as a basis to formulating a point system for the beach racket sport as well as other similar sports.

The sport of “Valetudo Racket” is the most athletic and sustainable form of beach racket certified by the number of participants across hundreds of tournaments across the country. Such was the success that “Valetudo Racket” was able to offer the software and the participation of its players in three world racket tournaments in 2015 in Mexico, in 2016 and 2017 in Spain, something that was unprecedented at the time.

## Rules and Regulations

The sport of "Valetudo Racket" is played on all surfaces but mainly in the sand. The dimensions of the field are 5.00 meters wide by 12.00 meters long and it is defined with use of five cm wide straps placed in the sand. One of the main components of the point system is the velocity of the ball, which is measured by the Doppler system (radar) using software that processes and captures the following data:

- 1) The velocity of the ball.
- 2) The total number of successful ball exchanges between players.
- 3) Average velocity of ball exchanges.
- 4) Falls of the ball: Each fall marks the end of the period (set) and is accompanied by a penalty.
- 5) The provision of incentives (bonus), above a certain velocity, that is, when the ball is hit with a ferocious velocity called a "strike" (see Annex, Game Bonus).
- 6) The provision of incentives (bonus), above a certain velocity when a set is started i.e. when the ball is served (See Annex, Service Bonus).
- 7) The provision of bonuses when exchanges become dynamic.
- 8) The successful return of a ball hit with a "ferocious" velocity i.e. a "strike"
- 9) Retrieving the ball in difficult circumstance before it touches the ground.
- 10) The termination of the game after the predetermined drop limit is exceeded.
- 11) The simultaneous improvisation by players in the alternation of their positions (solo).

The above actions are accompanied by characteristic sounds played through a loud speaker.

The main components that characterize the philosophy of the sport in FREE STYLE are:

- 1) Power. Exchanging balls with the highest possible average velocity.
- 2) Technique. As many ball exchanges as possible while maintaining a high average velocity, combined with the fewest drops.
- 3) Physical condition. Whether one will maintain explosiveness and determination throughout the game.

The different combinations that make a team are:

- 1) Mens Singles (two men), Doubles (four men).
- 2) Womens Singles (two women), Doubles (four women).
- 3) Mixed Singles, Doubles – Any combination of women and men.

### Categories, General Features

- 1) Category of boys, girls and mixed from 12 to 16 years old.
- 2) Category of men, women and mixed from 16 and up.
- 3) Categories of veteran men, women and mixed from
  - a) 40 to 49 years old
  - b) 50 to 59 years old
  - c) 60 to 69 years old
  - d) 70 and over.

If a category does not have enough players to complete at least 4 groups it than it will not be included in the tournament.

Though the general philosophy of V.R. is based around the saying "anything goes", some rules are necessary in order to help the image of the game by providing correct results without negatively affecting the prolificacy of the players.

The sport is played by either two players (singles) or four players (two sets of two, doubles). When two players compete they are positioned opposite each other. When four players compete then one set of players faces the other set of players.

In the main events "Valetudo Racket" players use rackets that are mainly made from wood both externally and internally. Though other materials are also used. The maximum dimensions of the rackets are confined to: Length 42 cm, width 24 cm and thickness 18 mm. Exterior paint is allowed. Internally, the construction should be such as not to artificially increase the velocity of the ball.

All the rackets will be accompanied by a certification from the Greek beach racket association that certifies no artificial elasticity is detected on either face of the racket. The front layer on each face of the racket should not exceed half a millimetre. If it turns out that a racket used by an athlete does not meet the above specifications, then the whole team will receive a point's deduction.

The balls used in the official tournaments will be of the "pressureless" type approved by well-known tennis companies as well as our V.R. model balls. The association in consultation with the players will supply the teams with four (4) brand new balls strictly upon their entry into the field.

It should be clarified that the competing players on the field are team mates whose aim is to send the ball to each other. They achieve this by hitting the ball with their rackets in the attempt to make as many exchanges as possible.

A set of exchanges from the beginning to the end (when the ball comes in contact with the ground after a fall) is called a period or (set). In each exchange of the ball at a velocity greater than 55km/h the team is rewarded with a point for each 1 km/h. Velocities greater than 55km/h are signified through different sounds that are emitted from a loud speaker that is connected to the measuring equipment. E.g. an exchange of the ball at 60 Km/h is equal to 60 points, the exchange of 70 km/h is equal to 70 points, etc.

All exchanges are added up until the ball falls. The calculation of the penalty for the fall of the ball is made by subtracting the velocity of the ball on the last exchange from the current score. This also signifies the end of the set and the playing time is paused. The total duration for a doubles games is 20 minutes and for the singles it is a total of 10 minutes (excluding delays for the pausing of time when the balls drops). The start and end of each set is always accompanied by a sound being emitted from the loud speaker.

In the event that the participating teams cannot complete the competition within the time available than the playing time will be reduced accordingly, a singles game from 10 minutes to 7 minutes and a doubles game from 20 minutes to 15 minutes, or any other duration proposed (if the total number of games left to complete cannot be completed with a reduction of 7 and 15 minutes) that will be decided by a vote cast by the participating clubs.

## Team composition

Each team must have an available substitute who has to be declared before the match.

The team captain is responsible for the behaviour of his/her players on the field. The coach is the leader of the team and a key component when communicating with the officials. The coach can immediately at the end of the set, if an issue arises declare his/her concerns. The coach is responsible for informing the officials the names of the players before the game commences and can request a "time out" (of one minute). The coach is also responsible for the substitute and receiving the results from the officials at the end of the game.

All competitors, through the use of a score board, have the opportunity during the game to be informed about all data that concern the game such as: remaining time, score, number of exchanges, average velocity, falls, etc.

Each team has a uniform appearance that represents the club when participating in league games. Each team is able to declare to the referee a "time-out" of a minute, which applies to all categories. All teams compete in the process of quarterfinals, semi-finals and finals.

All participating players must be members of V.R. having signed a solemn declaration that they are liable in case of illness or other medical event. Team members are obliged to represent their club for the entire season. If a player wishes to change club or team in the middle of the season, this will only be possible with the approval of his club.

## The Officials

### The officials consists of:

A) The referee, who is responsible for the whole process, completing and signing the match sheet, commencing (through the use of a whistle) the start of each game, is responsible for controlling the players who violate the rules (swearing, standing or unjustifiably obfuscating the lines of the court).

B) The person in charge of the radar (operator), who upon hearing the referees whistle, initiates the game by starting the software responsible for the initialization of the set. The operator is solely responsible for signalling the end to key periods such as observing when the ball comes into contact with the ground i.e. a fall/drop of the ball.

C) The deputy operator of the radar, using the software, counts data such as saving a ball from a drop, player positions and (if agreed) alternative strikes of the ball.

D) The leading official informs the referee and certifies that the court of play fulfils all rules and regulations. They are responsible for the judging the suitability of the balls and rackets that will be used during the games. They are also responsible for overseeing the collection of players' participation fees. In addition, they records in the match sheet possible penalties imposed by the referee.

## Specification of the field of play

The dimensions of the field of play is 5.00 m wide by 12.00 m long and is marked by a five cm wide strap that is placed in the sand forming a rectangle that encloses the field of play. These dimensions are required as to keep the ball within the field of view of the radar as if the balls extends futher than these dimensions strikes of the ball cannot be recorded. This has been accepted by all institutions.

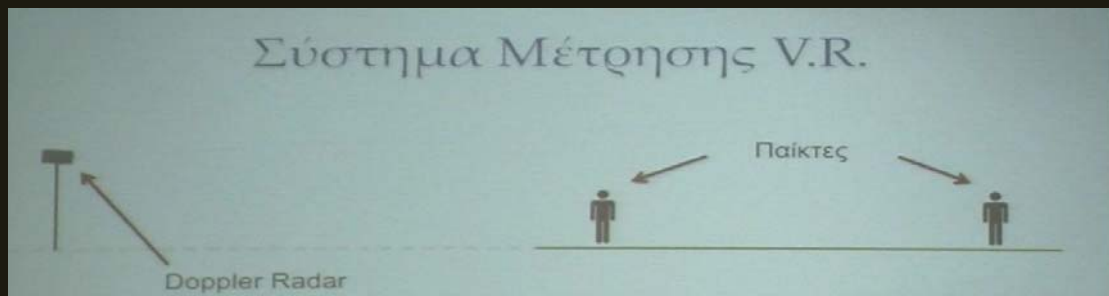
In the future, with the introduction of more advanced measuring systems, the sport of beach racket will be able to introduce additional points for certain manouveres. For example a new system may allow us to record the speed and direction of the ball thus perceiving its exact trajectory and distance between the players. Knowing the characteristics of such a strike, we will be in a position to introduce to our software a "multiplier of difficulty" to acknowledge the difficulty in executing such a strike, saving a drop etc.

Hence with an improved method of calculation the current maximum boundaries of the field can be extended. Thus, a new playing field can be created with different dimensions e.g. 16.00 m long by 8.00 m wide, where the sport can be conducted. Our current point system would be the same, based on previous test results, just the addition of a "multiplier of difficulty" that takes into account the distance between the players.

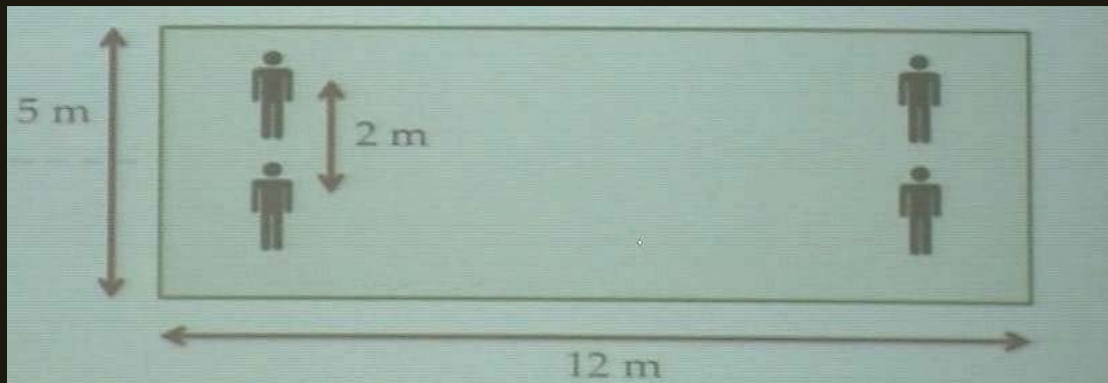
## Doppler Radar System



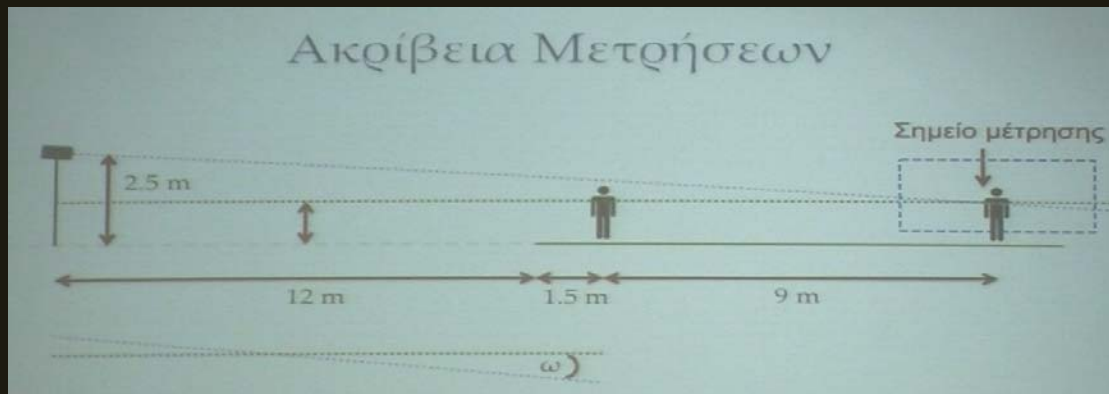
## Positioning of the Doppler Radar System



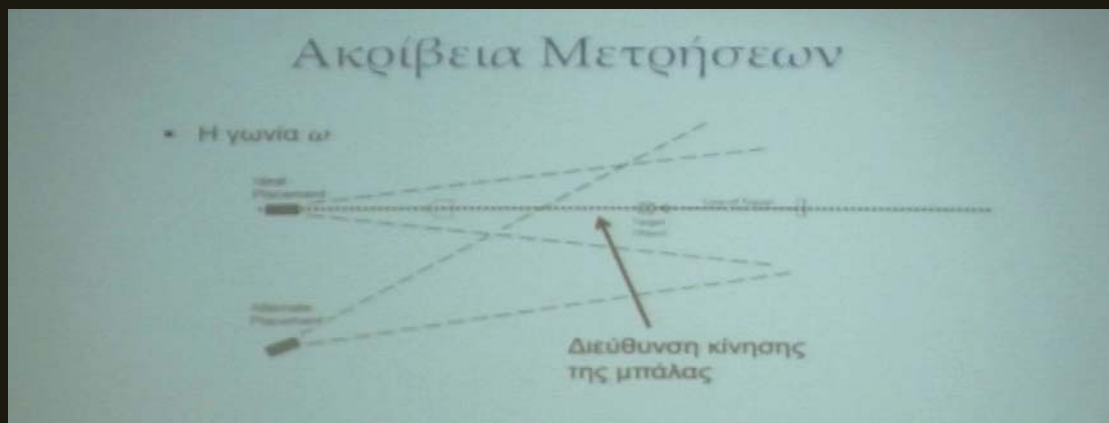
## Illustration of the field of play



## Optical View



## Explanation of optical view



## Terms of play and obligations of the players

Within the field of play, each player can either act offensively or defensively from any point depending on the phase of play. If necessary, a player can move outside the field of play (offensive or defensive) for example in an attempt to retrieve a wayward hit ball and then returning. If however a player extends outside the boundaries in an attempt to gain an advantage i.e. the strike will be easier to make, then the referee shall prompt the player to stop said action, if the player does not follow the guidance than the referee can show the player a yellow card. If the same offense continues then there will be a penalty for the team applied by issuing a "drop" at the end of each set.

### Return of the ball after a drop

In order not to interrupt the flow of the game, it is imperative that the ball be returned through the use of "ball boys". It is logical and imperative that at the beginning of every set that the time starts promptly when the player has possession of the ball.

### Competitive components of the sport

**1) SERVICE:** It is the first ball of the set (offensive strike) which is optional. The service is recorded as a statistic for each player.

**2) RESCUE:** The rescuing of the ball by a player before it ends in a fall/drop is classed as "advantage" play and is rewarded with bonus points at the end of the set. Such play must fulfil one of the two characteristics, either, 1/ Diving to the ground in such a way that the players body is horizontal to the ground and 2) Being forced outside the field of play in an effort to save the ball from a drop.

The rescue bonus will be valid and recorded only after being pronounced by the referee. At the end of the set the operator should select the name of the player with the use of the cursors, who retrieved the ball or by pressing the key's (M) and (L) for a singles match or (M, L, P, ?) for a doubles match.

Such a bonus action will be awarded with 400 points and will be accompanied by sound played through the load speaker. In the software it will be marked with an indication "ADV". In case an "ADV" is incorrectly given by the operator and if an objection is submitted at the end of the set providing the bonus is deemed invalid, then this can be amended through the software and the "ADV" bonus can be removed. All this will be under the discretion of the match referee. A ball that has been rescued is recorded as a statistic for the player.

**3) BONUSSES:** Determined through the difficulty test "Z" which is the only reliable way for a fair "strike" reward system. A "strike" must be over 75 km / h. By using the players statistics it was a logical move for this "strike" bonus (see Annex).

**4) ETHICS:** The behaviour and general image of a team to act honestly according to the rules of the sport, obeying the decisions of the referee and showing respect to all participating in the sport, other than their sporting obligations, will be rewarded with the ethics award.

**5) DENSITY OF EXCHANGES:** A great innovation, which is also our copyright, was achieved by adding bonuses depending on the duration of the time between each strike. That is, the density of exchanges is rewarded. This is achieved by using a multiplier. A valid bonus is activated when the time elapsed between two consecutive strikes is under two seconds and will increase by 33% on every strike 0.5 seconds below the 2 second limit, influencing the players to respond as soon as possible to achieve a greater score. In case of a quick return less than 0.5 seconds an "anti-strike" will score double the value of the initial strike, when an "anti-strike" occurs it will be accompanied with a sound from the loud speaker.

**6) FALLS:** Included in the category of degree of difficulty for FREE STYLE, it is defined for all categories of saving a ball from a fall/drop. For a singles game it is set at 25 drops, and for the doubles game it is set at 50 drops. If a team exceeds this limit, then each ball that falls to the ground will lead to a deduction of twice its velocity value plus any accumulated bonus point.

A change has been made regarding the last ball of the game. If a point is given before the end of the game, irrespective of where the ball may lay to rest, this point will be deemed invalid and will be deducted by the assistant referee.

**7) END OF THE GAME DUE TO DROPS:** If a team exceeds the limit of 30 drops for singles and 60 drops for doubles, then the end of the game will be accompanied by sound from the loud speaker that will be automatically signal the end.

**8) TIME:** The usefulness and ease of the time management system is one of the most important features of V.R. The pausing of the timer by the operator after a fall (end of the set) is a key principle that is a necessity for the sport to function in its current form.

**9) PLAYERS CHANGE OF POSITION:** When a player, through an attacking motion improvises and changes their position with their teammate (in a double's game) a completing of such an action after returning to their original position will be registered as a bonus point and will be rewarded with 400 points. This will be indicated by the referee and will be added at the end of the SET with the known keyboard shortcuts and will be accompanied by sound from the load speaker.



## Penalties

1. Expulsion from the championship, by decision of the Olympic committee for the following violations:

a. Participation in group violence, a coordinated attack, either verbal or through physical contact, by two or more players or the coach against the referee, the referee's assistants or the match officials.

b. A cohesive aggressive attack by either players, coach or their representative, against the league.

c. A player, coach or team representative is expelled from the league if he/she brutally insults the league and those involved in it with actions or public statements. All players during the game should refrain from petulant outbursts and respect the institution. It is logical that anything that has to do with swearing, bad behaviour and any other offensive behaviour towards the institution and individuals will face retrospective consequences for their actions.

## Schedule for the Season

The schedule will be made public and will contain three events that will benefit the participation of teams for all over Greece. The first two will take place in pre-selected regions of the country.

1) First event:

2) Second event:

3) Third event:

The results of the 1st and 2nd event will determine which teams will participate in the 3rd event. Once the total number of teams that will compete in the 3<sup>rd</sup> event is known this will allow the committee to schedule the third event as so to be completed in the time available and not to spring unforeseen surprises with regards to time allocation.

There are three (3) regions in Greece where these events will take place.

1) Regions of Attica and Peloponnese.

2) Region of Northern Greece.

3) Region of Crete.

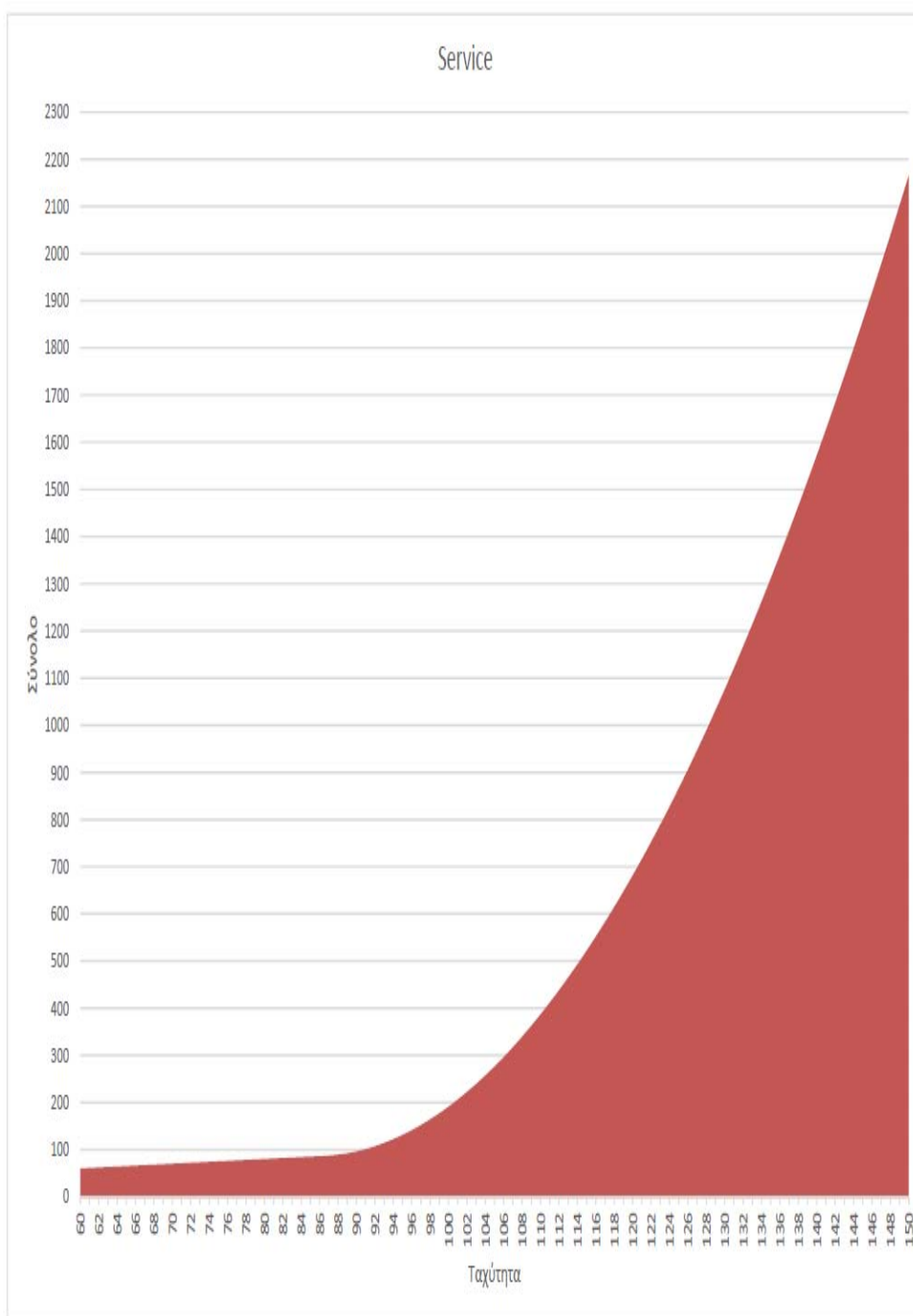
The venues that will host the events must strictly fulfil all prescribed standards as well as allocate the human resources required to host the event such as referees, rules, ball boys, etc. The following infrastructure must also be available:

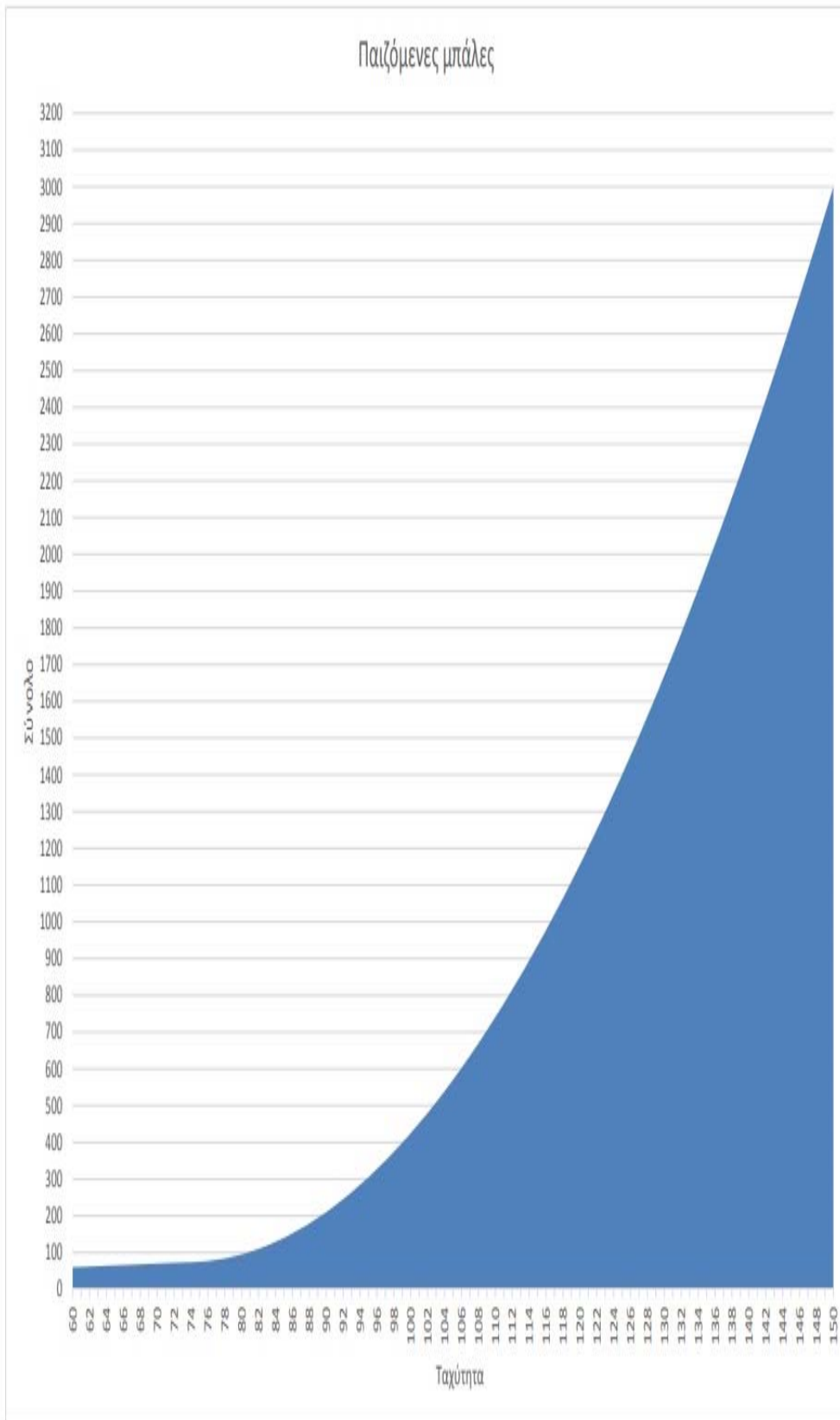
Two courts (one for a team to "warm-up") with dimensions 12m by 5m with a perimeter of at least two meters. Windbreakers must be four meters in height. The field of play must face the north-south direction. A radar system at least ten meters from the field of play. Player participation is set at five euros (5 €).

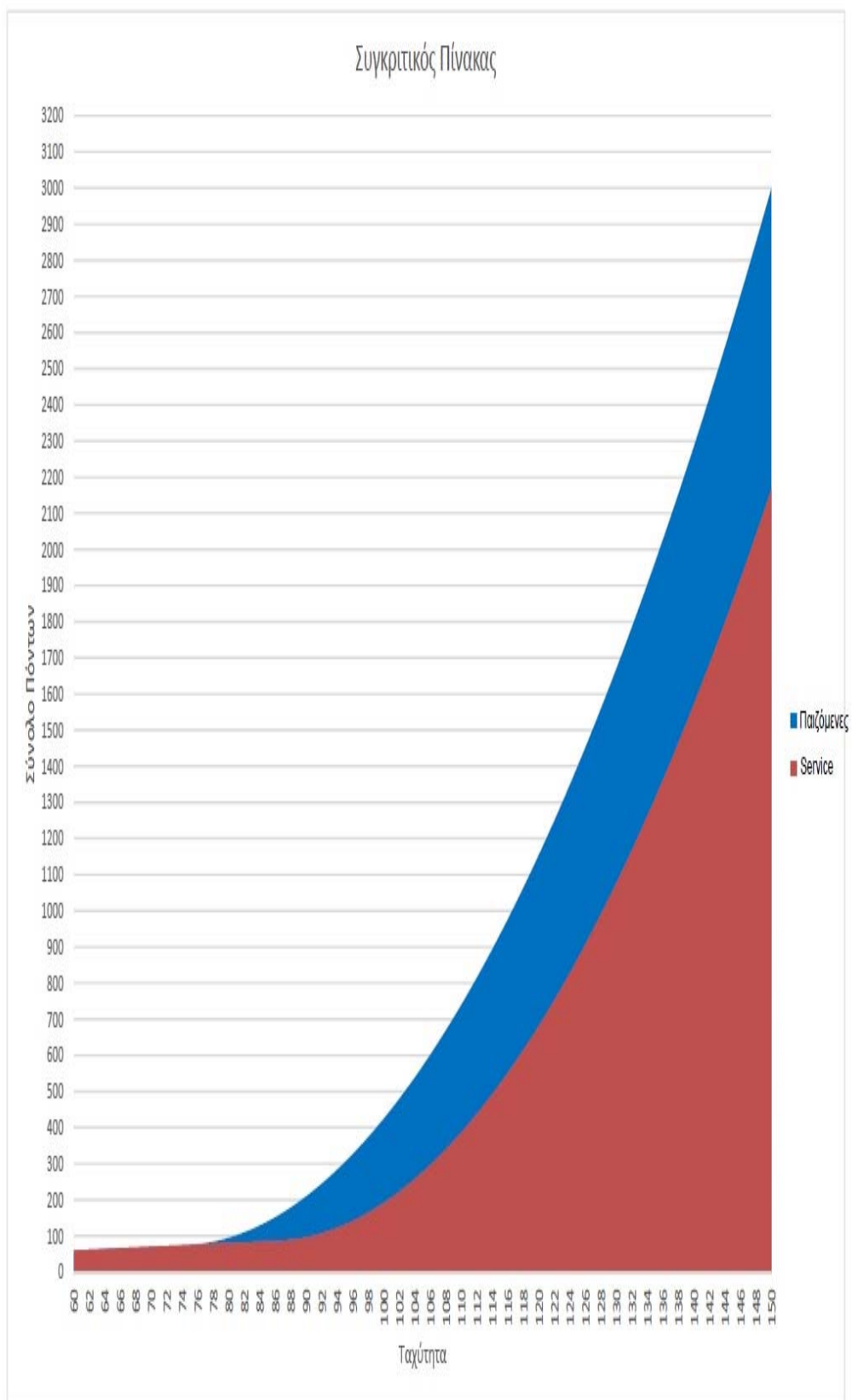
The monies collected from the participants goes towards covering the financial needs of the group organizers. All the dates of planned events as well as other events such as the open tournaments, will be announced in time so that all the participants have full knowledge and will be able to arrange their travel to the venues in a timely manner.

Each team should be informed by the organizing club about the time of its match, taking into account the necessary amount of time required for the warm-up of its players.

## ANNEX







Ταχύτητα	Bonus	Σύνολο	Service	Bonus	Σύνολο
60	0	60	60	0	60
61	0	61	61	0	61
62	0	62	62	0	62
63	0	63	63	0	63
64	0	64	64	0	64
65	0	65	65	0	65
66	0	66	66	0	66
67	0	67	67	0	67
68	0	68	68	0	68
69	0	69	69	0	69
70	0	70	70	0	70
71	0	71	71	0	71
72	0	72	72	0	72
73	0	73	73	0	73
74	0	74	74	0	74
75	0	75	75	0	75
76	1	77	76	0	76
77	3	80	77	0	77
78	6	84	78	0	78
79	10	89	79	0	79
80	15	95	80	0	80
81	21	102	81	0	81
82	28	110	82	0	82
83	36	119	83	0	83
84	45	129	84	0	84
85	55	140	85	0	85
86	66	152	86	0	86
87	78	165	87	0	87
88	91	179	88	1	89
89	105	194	89	3	92
90	120	210	90	6	96
91	136	227	91	10	101
92	153	245	92	15	107
93	171	264	93	21	114
94	190	284	94	28	122
95	210	305	95	36	131
96	231	327	96	45	141
97	253	350	97	55	152
98	276	374	98	66	164
99	300	399	99	78	177
100	325	425	100	91	191
101	351	452	101	105	206
102	378	480	102	120	222
103	406	509	103	136	239
104	435	539	104	153	257

Continued:

105	465	570	105	171	276
106	496	602	106	190	296
107	528	635	107	210	317
108	561	669	108	231	339
109	595	704	109	253	362
110	630	740	110	276	386
111	666	777	111	300	411
112	703	815	112	325	437
113	741	854	113	351	464
114	780	894	114	378	492
115	820	935	115	406	521
116	861	977	116	435	551
117	903	1020	117	465	582
118	946	1064	118	496	614
119	990	1109	119	528	647
120	1035	1155	120	561	681
121	1081	1202	121	595	716
122	1128	1250	122	630	752
123	1176	1299	123	666	789
124	1225	1349	124	703	827
125	1275	1400	125	741	866
126	1326	1452	126	780	906
127	1378	1505	127	820	947
128	1431	1559	128	861	989
129	1485	1614	129	903	1032
130	1540	1670	130	946	1076
131	1596	1727	131	990	1121
132	1653	1785	132	1035	1167
133	1711	1844	133	1081	1214
134	1770	1904	134	1128	1262
135	1830	1965	135	1176	1311
136	1891	2027	136	1225	1361
137	1953	2090	137	1275	1412
138	2016	2154	138	1326	1464
139	2080	2219	139	1378	1517
140	2145	2285	140	1431	1571
141	2211	2352	141	1485	1626
142	2278	2420	142	1540	1682
143	2346	2489	143	1596	1739
144	2415	2559	144	1653	1797
145	2485	2630	145	1711	1856
146	2556	2702	146	1770	1916
147	2628	2775	147	1830	1977
148	2701	2849	148	1891	2039
149	2775	2924	149	1953	2102
150	2850	3000	150	2016	2166

