



# MILITARY PENTATHLON AS A FORCE MULTIPLIER FOR THE SOUTH AFRICAN ARMY INFANTRY SOLDIER 2020



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*The SA Army Infantry Soldier*

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### **Personal**

My wife Adri and my daughter Elsabé for al their support to me for allowing me in making a valuable contribution to the South African National Defence Force Military Pentathlon.

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## **EXECUTIVE SUMMARY**

### **INTRODUCTION**

1. The environment in which the South African (SA) Army Infantry (Inf) soldiers of 2020 are going to operate in will be complex and thus requiring effective mission training. Because the soldier of 2020 will require more training, specifically in the areas of general fitness and skills, to be the ultimate warrior, shooting, obstacle running and swimming will necessarily become important. Therefore, the use of a training aid such as Military Pentathlon to improve the skills of the Infantry soldier of 2020 becomes extremely useful.

2. From its inception, Military Pentathlon in 1946 was designed to assist with the preparation of soldiers on the basis of competition that was specifically related to the skills, physical, psychological and leadership environments needed by the soldier on the battlefield.

### **MAIN CONSIDERATIONS**

3. The SA Army Inf Formation (Fmn) commissioned research into the possibility to utilise Military Pentathlon as a training aid and force multiplier. The following critical questions were identified; What is the international and national history of Military Pentathlon?; What are the characteristics and disciplines of Military Pentathlon as a sport? ; What would be the tasks and characteristics of the SA Army Inf Soldier of 2020? ; What advantages in force preparation are there for the SA Army Inf Soldier of 2020 in making use of Military Pentathlon as a Force Multiplier? and What is the status of Military Pentathlon capabilities in the SA Army?

### **HISTORY OF MILITARY PENTATHLON**

4. The "In 1946, a French officer, Captain Henri Debrus conceived the idea of organising a sports competition reserved exclusively for the Army. His attention was drawn to a military physical training technique at that time practised by the Netherlands Airborne Units. It consisted of parachute jumping, marching, crossing of obstacles and finally performing combat operations with small arms and grenades. Captain Debrus, taking the Dutch method as a guide, eliminated the parachute jump and modified the other tests so as to form a system, which he thought would constitute an ideal way of completing ground training. Since 1947, the five disciplines of the Military Pentathlon have been shooting, obstacle running, utility swimming, throwing and cross-country.

### **CHARACTERISTICS AND DISCIPLINES OF MILITARY PENTATHLON**

5. The characteristics of Military Pentathlon being related to the roles and functions of the soldier, is a combination of concentration skills, physical endurance and psychological challenges. The one who masters all the disciplines of Military Pentathlon is the one that will excel on the sport and battlefield, thus depicting the versatility of the SA Army Inf Soldier of 2020.

6. In the shooting competition, battlefield conditions are simulated in firing both precision and rapid to test the skills of the soldier. Obstacle running measures the battlefield manoeuvre on foot over a distance of 200 m, crossing 20 obstacles, which is reflective of most obstacles on the battlefield. Utility swimming on the other hand,

tests the survival skills of the soldier in the water, and requires the soldier to cross four obstacles in 50 m in any swim style. Throwing determines the competency level of the soldier in an accuracy and distance discipline and cross-country determines the competency level of the soldier by running over uneven terrain simulating battlefield conditions over a distance of 8 km.

## **TASKS AND CHARACTERISTICS OF THE SA ARMY INF SOLDIER OF 2020**

7. The SA Army soldier of 2020 will be a versatile soldier who will be required to execute a vast array of tasks in the conventional, peace support and other related environments. The personal attributes of the SA Army Inf Soldier of 2020 will require from him or her to be technologically advance, highly adaptable, mentally tough, highly disciplined, a good communicator and physically in good health.

## **ADVANTAGES OF MILITARY PENTATHLON AS A FORCE MULTIPLIER**

8. The research emphasizes the importance of phasing training and that training should be mission specific. In this regard Military Pentathlon could be of great assistance as it is “custom made” to specifically enhance the battlefield skills of the soldier. The advantages of Military Pentathlon as a force multiplier to compliment the phasing of training can be grouped in under the headings of physiological and physiological effects. Although the physical benefits are obvious the physiological benefits is the single most important benefit to the SA Army Inf Soldier of 2020. The fact that leadership and simulated psychological effects of the battlefield is practiced, thus creating the flow and winning feeling greatly contributes to the success of Military Pentathlon as a force multiplier in the preparation of soldiers for the battlefield.

9. International trends indicate that countries in Europe, Asia, Africa and the Americas make use of the elements of Military Pentathlon to train their soldier. In this regard The Nederland's is the best example.

## **FACILITIES PERSONNEL AND DOCTRINE**

10. While Military Pentathlon is advantages as a force multiplier, there are limitations Military Pentathlon facilities are limited to some Inf units but will be supplemented by more facilities, in time, to ensure the effective training of its soldiers. Several venues have been identified for development which will be developed as fund become available. These facilities are located at training institutions to ensure optimum use of resources. In addition personnel is a critical asset to the success of Military Pentathlon as a force multiplier, this includes trained administrators and athletes / soldiers. In this regard several administrators and athletes have been trained but are still not formalized in training policies to form the bases for the training of the masses.

## **CONCLUSION**

11. In the researchers opinion the research undoubtedly proved that Military Pentathlon can be utilized as a force multiplier in not only the force preparation of the SA Army Inf Soldier of 2020, but can also be applied to other soldiers in general to enhance their skills and fitness levels. In short the SANDF has the opportunity to become leaders in utilizing Military Pentathlon as a force multiplier in the force preparation of the SA Army Inf Soldier of 2020.

## SUBJECT: “MILITARY PENTATHLON AS A FORCE MULTIPLIER IN THE FORCE PREPARATION OF THE SOUTH AFRICAN ARMY INFANTRY 2020”

### INTRODUCTION

1. General Douglas Macarthur of the United States said: “Back in the battlefields, I was convinced that the soldiers who practiced sport had become the best combatants. They were the boldest, hardest and most courageous of those that fought alongside me. These men, when they took part in battles, fighting other human beings and submitting to the rules of the combat, were the ones that more readily were prepared to accept and accomplish missions”(37: 30). It is also to be noted that Gen Paton was a pentathlon athlete who represented the USA in the 1912 Olympics, which is a good example of the skills acquired on the sports field applied to great effect on the battlefield (14: 3).
2. In the 2<sup>nd</sup> World War South African troops had some spare time available. In order to keep these members busy Capt Danie Craven<sup>1</sup> designed a game based on skills and fitness, which was called “Potted Sports”. It basically consisted out of skills related activities for example disassemble and assemble of weapons against time linked to running a certain distance and then handed over to the next competitor. In this way he promoted teamwork, enhanced skills / fitness and Esprit de Corps.
3. From the inception of Military Pentathlon in 1946 it was designed to assist with the preparation of soldiers on the basis of competition to measure themselves against each other and also against elements in their environment. It later leads to the participation between countries to foster goodwill amongst nations and to gauge competency levels. Military Pentathlon aims to teach or refine the skills as indicated below in Fig 1. This specifically relates to the skills, physical, psychological and leadership environment.



**Fig 1: An overview of Military Pentathlon**

<sup>1</sup> Capt Danie Craven was the legendary Dr Craven of SA Rugby (71: 1).

4. It is also a fact that currently the results of the SA Army shooting and physical fitness are not of a very high standard. Swimming, especially, seems to be a challenge, seen in the light of the drowning of the SANDF mission members in Burundi. The involvement of the SA Army soldiers in peace missions and the increasing need for preparation to enforce or keep peace in built-up areas make it also necessary to rekindle the skill of accurate throwing with regard to the utilization of hand and or smoke grenades. The use of a training aid such as Military Pentathlon to improve the skills of the Infantry soldier of 2020 can be extremely useful.

## **METHODOLOGY**

5. Title: Military Pentathlon as a force multiplier in the force preparation of the South African (SA) Army Infantry (Inf) soldier of 2020.

6. Focus: Determine what benefits Military Pentathlon has as a force multiplier in the force preparation of the SA Army Infantry soldier of 2020.

### 7. Critical Questions

- a. What is the international and national history of Military Pentathlon?
- b. What are the characteristics and disciplines of Military Pentathlon as a sport?
- c. What would be the tasks and characteristics of the SA Army Inf Soldier of 2020?
- d. What advantages in force preparation are there for the SA Army Inf Soldier of 2020 in making use of Military Pentathlon as a Force Multiplier?
- e. What is the status of Military Pentathlon capabilities in the SA Army?

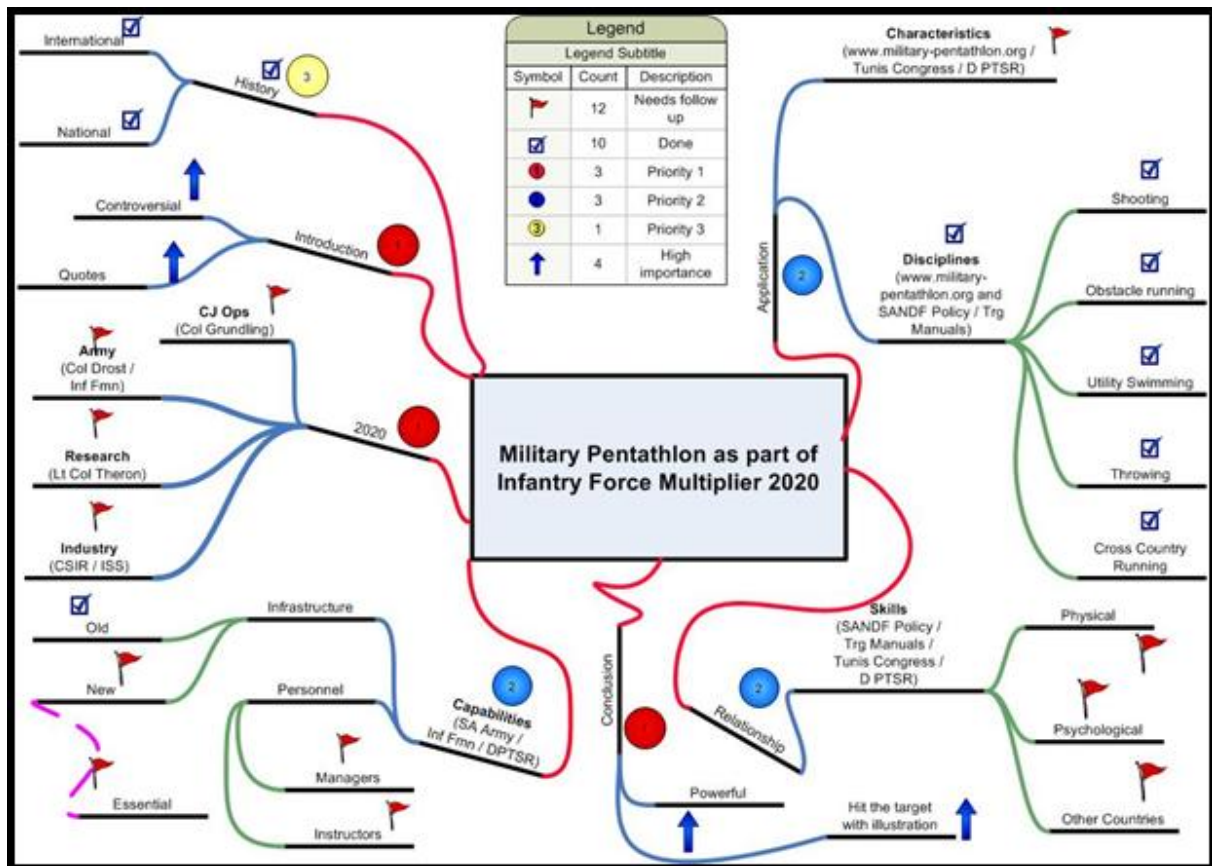
8. Rationale. To stay at the forefront of finding the most effective methods of training the SA Army Inf soldier of 2020, the SA Army Inf Formation (Fmn) commissioned this investigation to determine what role Military Pentathlon can play. The findings of this investigation would also be useful for the Inf Fmn Training Curriculum specialists and Policy makers at Level 1, 2 and 3<sup>2</sup>.

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<sup>2</sup> The levels refer to the command structure of the South African National Defence Force. Level 1 being the Chief SANDF, level 2 the SA Army and level 3 the SA Army Inf Fmn.



9. Literature Review and Progress Monitor. The diagram in Fig 2 indicates how the author planned the research, how the literature review was conducted and how the process was monitored.



**Fig 2: Illustration of Planning and Monitor of Progress**

## ACKNOWLEDGING LIMITATIONS

10. The research will not address the tactical level and therefore will have to be supplemented with research relating to the tactical level. It is also mentioned that the South African National Defence Force (SANDF) could only provide a draft copy available of the SA Army Vision 2020<sup>3</sup>. The SA Army Vision 2020 document is still in its planning phase and will not be finalised before the research for this document has been finalised. It should also be stated that although consultation was done over a broad base to ensure a representative view of the SANDF relatively few members utilized the opportunity to give their inputs with regard to this important subject.

<sup>3</sup> Vision 2020 of the SA Army describes how the SA Army should be structured and operated in 2020 (49: 1).

## CRITICAL QUESTION 1: WHAT IS THE INTERNATIONAL AND NATIONAL HISTORY OF MILITARY PENTATHLON?

### INTERNATIONAL

11. The international history of Military Pentathlon would be outlined according to the official version supplied by the President of World Military Pentathlon Organisation<sup>4</sup>. No information could be identified to contradict this information (35: 1-4).

12. "In 1946, a French officer, Captain Henri Debrus (later promoted to the rank of Colonel and President of the International Military Sports Council (CISM)) conceived the idea of organising a sports competition reserved exclusively for the Army. See Fig 3 (36: 1). His attention was drawn to a military physical training technique at that time practised by the Netherlands Airborne Units. It consisted of parachute jumping, marching, crossing of obstacles and finally performing combat operations with small arms and grenades.



***Fig 3 : Col Henri Debrus the founder of Military Pentathlon  
who later become the President of CISM***

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<sup>4</sup> Brig Gen J. Pucher is from Austria who was also an accomplished former International Pentathlon Athlete and now the President of the International Military Pentathlon Organisation, regarded as a world authority on Military Pentathlon (36:1).

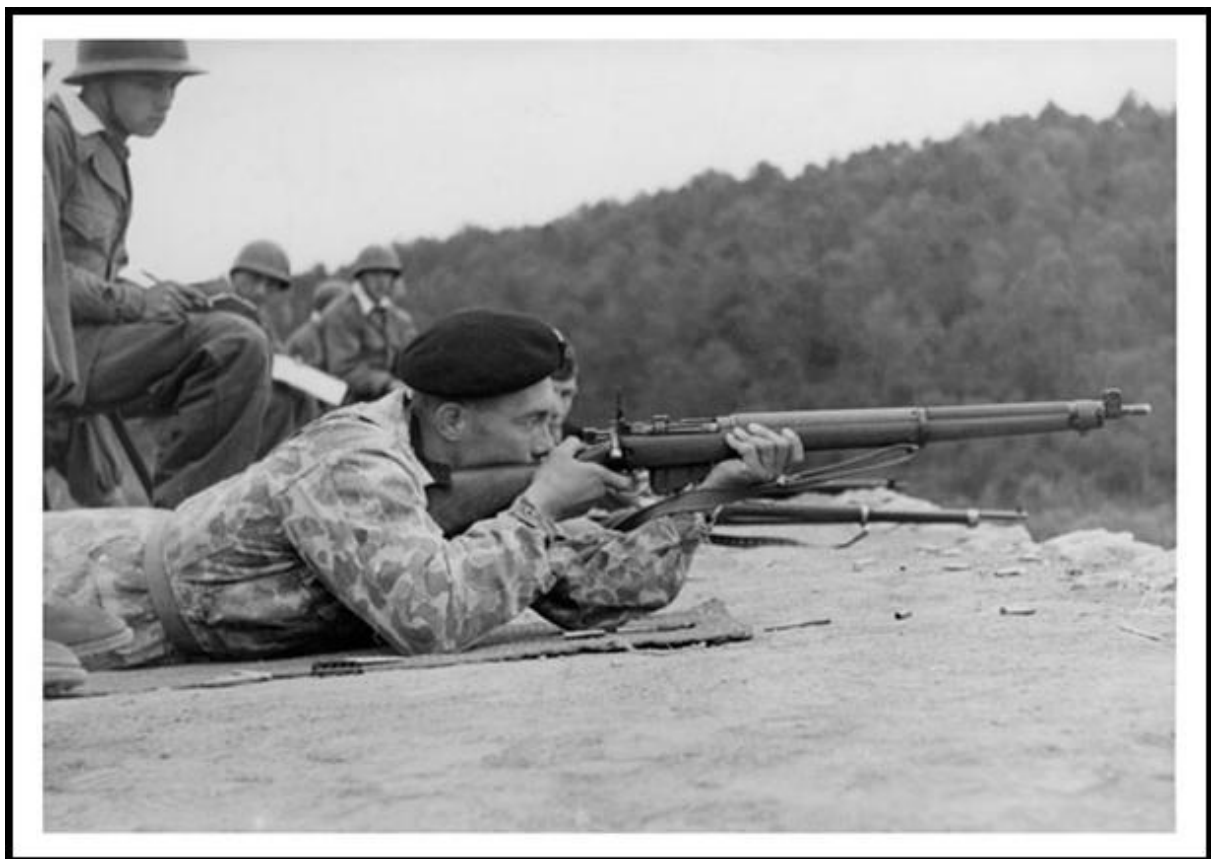
13. Captain Debrus, taking the Dutch method as a guide, eliminated the parachute jump and modified the other tests so as to form a system, which he thought would constitute an ideal way of completing ground training.

14. The first competition organised by him in August 1947, was held at the Military Physical Training Centre at Freiburg in the French occupation zone in Germany, with the participation of Belgian, French and Dutch teams.

15. The French military authorities approved the improved regulations, resulting from this trial and the disciplines included in the competition were widely adopted throughout the French Forces under the name of Military Pentathlon" (35: 1-4).

16. Since then, the five disciplines of the Military Pentathlon have been:

- a. Shooting with standard rifle (200 metres), one precision and one rapid-fire test from the prone<sup>5</sup> position as seen in Fig 4 (36: 2).



***Fig 4: Shooting in the 1951 Competition***

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<sup>5</sup> Shooting in the lying down position on the shooting point.

- b. Obstacle running over a distance of 500 metres with 20 obstacles simulating most battlefield foot manoeuvre obstacles as depicted in Fig 5 (36: 3).



***Fig 5: Obstacle Running in the 1955 Competition***

- c. Obstacle swimming over a distance of 50 metres with 4 obstacles confirming the skills of swimming and water crossing as seen in Fig 6 (36: 4).



***Fig 6: Obstacle Swimming in the 1953 Competition***

- d. Throwing with standardised projectiles one being a precision and the other a distance test to test the soldier's skills with regard to accuracy and distance throwing as seen in Fig 7 (36: 5).



*Fig 7: Throwing in the 1953 Competition*

- e. Cross-country (8 km for male competitors) testing general cross-country agility and fitness as seen in Fig 8 (36: 6).



*Fig 8: Cross Country Running in the 1951 Competition*



17. "The International Military Sports Council (CISM) became interested in this project and set about creating a spirit of incentive in the different services by organising an annual international championship.

18. After its modest start in 1950, when only three nations entered the competition, international Military Pentathlon has developed into one of the most important military competitions in CISM and competed each year since then with growing success.

19. The CISM World Championships has only been cancelled three times since 1950. This was mainly due to high political tension or war in the region where the Championships were supposed to be organised.

20. In 1988 the Scandinavian Nations tested for the first time rules for female competitors at their Nordic Championships<sup>6</sup>. Since the CISM World Championship 1991 in Oslo, Norway, female competitors have been participating on a world level with only a few changes to the rules formerly applied to the men.

21. After the abolishment of the Warsaw Pact's sports association Military Pentathlon got new momentum due to the membership of countries from the former Eastern block to CISM. This growing interest in Military Pentathlon led to the establishment of Continental Championships in Europe. The first took place in Munich, Germany, in 1992.

22. In 1993, for the first time, a new event of Military Pentathlon was tested on the occasion of the Second CISM European Championship in Wiener Neustadt, Austria - the Obstacle Relay. As from 1995 this discipline has been part of the annual CISM World Championship programme.

23. Military Pentathlon is an integral sports discipline of the CISM World Games, highlighted by the World Games organised in Rome 1995 and in Zagreb 1999.

24. During the last decade Military Pentathlon has expanded remarkably. Each year a series of competitions are organised worldwide with the main emphasis on Europe. The most important competitions are the World Championships, where the number of participating nations has increased from about 20 to more than 30. China and Brazil have dominated the men's championships during the last decade. The most successful women teams come from China, Denmark and recently from Peoples Republic of Korea (PRK).

25. However, Military Pentathlon is not only one of the most outstanding sports organised by the military but is also related to the civilian sports world. In several countries, especially in the Nordic countries and in Central Europe, civilian sports organisations have adopted Military Pentathlon and have been organising competitions with civilian participation.

26. Also in the framework of the North Atlantic Treaty Organisation (NATO) the Inter-allied Confederation of Reserve Officers (CIOR) and the Association Europeenne des Sous-Officiers de Reserve (AESOR) competitions similar to Military Pentathlon are organised with different regulations and disciplines to some extent.

27. In 1997 Military Pentathlon was invited to be a demonstration sport at the civilian World Games in Lahti, Finland" (36: 1-4).

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<sup>6</sup> Nordic Championships is held in the Scandinavian countries primarily for these countries but also open to other interested countries (36: 2).

## NATIONAL

28. The year 1995 was in more than one way very important for the SANDF. Not only was South Africa welcomed back into the international Military Sports Arena with their participation in the 1<sup>st</sup> Military World Games in Rome, but the observers also witnessed for the first time a completely new (for South Africa) sport (24: 1-3).

29. So impressed were they that they recommended to the then Chief of the Army Lt Gen Reginald Otto, that Military Pentathlon should become a sport in the SA Army. This led to the appointment of Lt Col Johan Zietsman as the chairman for the development of this sport. In July 1996 Lt Col Johan Zietsman was sent as an observer to the World Championships in Wiener Neustadt. After he came back work really started at ground level.

30. In 1997 Lt Col Schreuder le Roux and Maj Marius Gouws came on board to form the executive committee of this sport. In February 1997 the SANDF were privileged to host the Austrian team in Heidelberg (Gauteng) and Potchefstroom where the first training clinic was presented. During this year obstacle courses were constructed at these institutions and the sport started to take off. Lt Col Johan Zietsman again attended the World Championships, this time at Kristinehamn in Sweden. On his return it was decided that the only way to fully develop the sport was through international participation. The opportunity came in 1998 when the first South African Military Pentathlon team participated in a Regional Competition in Arlon, Belgium. Since then the team not only had the opportunity to train in Austria, Germany and The Netherlands, but they also participated in the World Championship from 1999 to 2003. See Fig 9 – 14 (76: 1-6).



*Fig 9: RSA Athlete in the Shooting Event  
at the 2003 World Championship in Spain*



***Fig 10: RSA Athlete at the Obstacle Running Event  
at the 2003 World Championship in Spain***



***Fig 11: RSA Athlete in the Obstacle Swimming Event  
at the 2003 World Championship in Spain***





***Fig 12: RSA Athlete at the Throwing Event  
at the 2003 World Championship in Spain***



***Fig 13: RSA Athlete at the Cross-Country Event  
at the 2002 World Championship in The Netherlands***



**Fig 14: RSA Athlete at the Obstacle Relay Event  
at the 2002 World Championship in The Netherlands**

31. In 2000 Brig Gen Johan Jooste was appointed as the patron for the sport in the SANDF. This ensured that Military Pentathlon was established as an integral part of the SA Army and since 2002 in the SANDF.

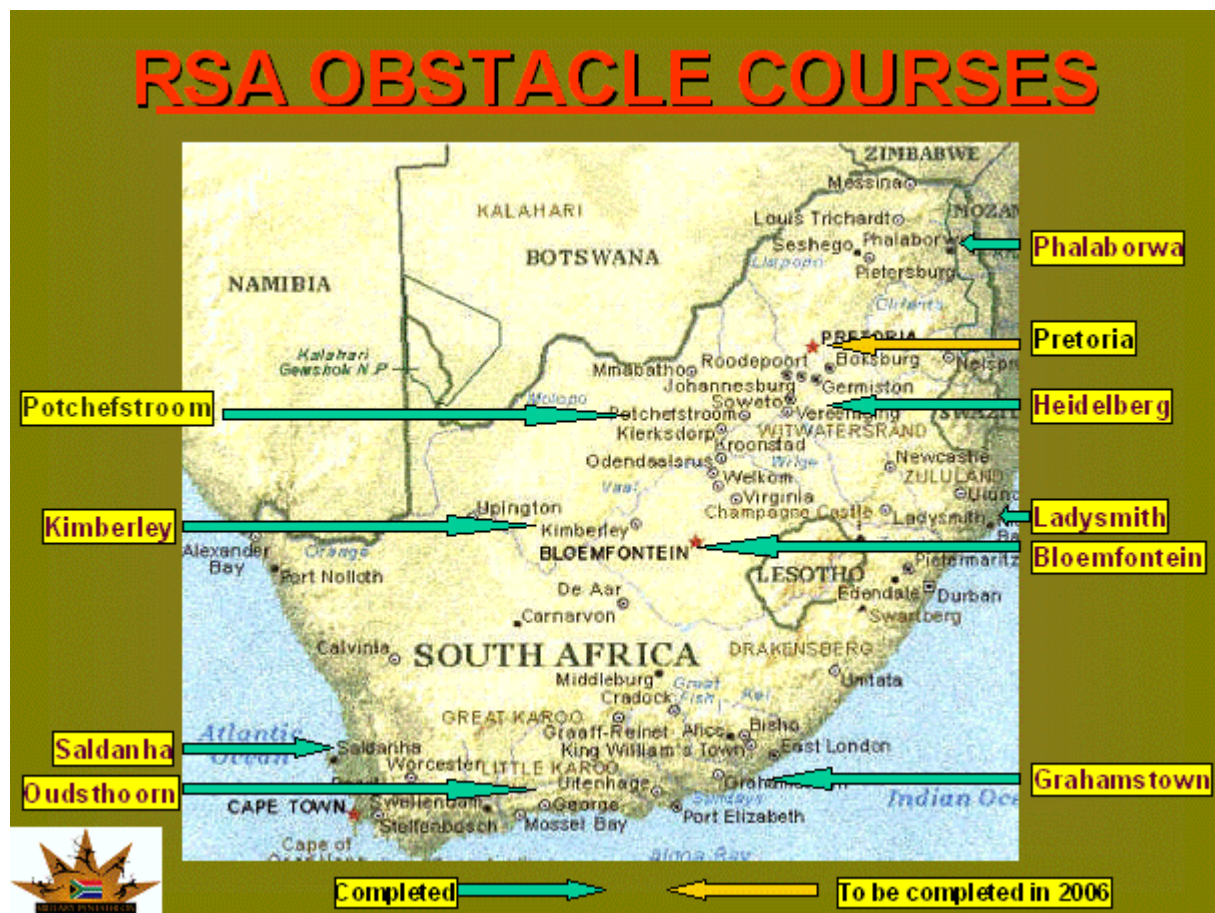
32. Infrastructure. The SANDF and in particular the SA Army has invested in infrastructure over the years to be utilized as a Force Multiplier. The following infrastructures are already available in the SANDF.

Ser No	Venue	Year Constructed	Shooting Manual <sup>7</sup>	Obstacle Course	Obstacle Swimming	Throwing	Cross Country
	a	b	c	d	e	f	g
1	Bloemfontein (1 SAI Bn / 44 Para Regt)	1998	Yes	Yes	Yes	Yes	Yes
2	Heidelberg (Army Gym)	1997	Yes	Yes	Yes 25 m only	Yes	Yes
3	Kimberley (3 SAI Bn)	2003	Yes	Yes	Yes	Yes	Yes
4	Kimberley (Mil Sport Grounds)	2000	Yes	Yes	Swimming pool only	Yes	Yes
5	Saldanha (Mil Academy)	2001	Yes	Yes	Swimming pool only	Yes	Yes
6	Grahamstown (6 SAI Bn)	2000	Yes	Yes	Swimming pool only	Yes	Yes
7	Ladysmith (5 SAI Bn)	2000	Yes	Yes	Swimming pool only	Yes	Yes
8	Phalaborwa (5 SFR)	2000	Yes	Yes	Swimming pool only	Yes	Yes
9	Potchefstroom (Int School)	1997	Yes	Yes	Swimming pool only	Yes	Yes
10	Ermelo (close to 4 SAI Bn)	1999	Not in Service	Not in Service	Not in Service	Not in Service	Not in Service
11	Oudtshoorn (Inf School)	2005	Yes	Yes	Swimming pool only	Yes	Yes

<sup>7</sup> No electronic scoring system available.



33. To view the above information graphically see the a map below (Fig 15):



**Fig 15: Map of Existing and Planned Military Pentathlon Facilities**

34. Important Decisions. The SA Army took a decision in principle in October 2002 that Military Pentathlon will be an integral part of all the training curriculums of its soldiers. At the same time the SA Navy uses Naval Pentathlon, as its primary skills enhancement programme. This decision would have had an enormous effect at all levels of training being that all training curriculums should have been adapted to accommodate Military Pentathlon as a basic skills enhancement tool by July 2003. Simultaneous to these, instructors at training institutions were to be trained in the basic skills of Military Pentathlon, existing facilities were upgraded and at predetermined venues new facilities were to be built. However, somehow this decision has not yet been implemented at level 3 or 4 (Formation / Unit level) in the SA Army.

35. The Future. The SANDF will continue their initiatives into Africa with specific reference to Botswana, Lesotho and Namibia. It is extremely important that more countries in Africa become involved in Military Pentathlon for the survival of the sport in Africa. Financial constraints wrt participation in future World Championships make this option more and more important and could be a useful vehicle to promote some of the values of the African Union Standby Force (AUSF), such as joint ness and cohesiveness.

## CRITICAL QUESTION 2: WHAT ARE THE CHARACTERISTICS AND DISCIPLINES OF MILITARY PENTATHLON AS A SPORT?

36. In order to emphasise the potential of Military Pentathlon as a force multiplier, it will be addressed under the headings of characteristics and disciplines.

### CHARACTERISTICS

37. Military Pentathlon has its origin in military training. The top priority is the challenge of producing effective fighting soldiers with new training methods. Changing the regulations, improving the competition sites and the equipment, has resulted in a type of sport that does not need to fear competition with civilian poly-athletic<sup>8</sup> competitions. Considering the many-sided demands made on the competitors, Military Pentathlon is without doubt prominent amongst poly-athletic competitions and the preparation of soldier's worldwide.

38. The following characteristics can be attributed to Military Pentathlon:

- a. The combination of:
  - i. Concentration and strong nerves are required for the rifle shooting especially when firing 10 rounds in 1 minute.
  - ii. The ability to tolerate enormous muscle hyperacidity<sup>9</sup>, as it is the case with the 800 m runners, acceleration, agility, courage and the will to take risks in the 500 m obstacle race.
  - iii. Precise micro-motoric<sup>10</sup> contractions and the ability to concentrate totally at precision throwing and the explosive power that a javelin thrower needs for the long distance throw.
  - iv. Above average endurance and willpower in the 8000 m cross-country running race. This places great demands on the sports-motoric ability, concentration, the competitor's psycho morale and aerobic<sup>11</sup> capacity.
- b. The performance of athletes can be compared the as follows:
  - i. "Successful marksmen in the Military Pentathlon get results up to 590 and more rings in the English Match (where 600 are the best).
  - ii. The best runners in the obstacle race are able to cover 800 m in approximately 1min 50 sec.
  - iii. The best time of the best obstacle swimmer in the 100 m freestyle competition is around 54 seconds.
  - iv. For a successful thrower in Military Pentathlon, distances with a javelin between 65 to 75 m are realistic, provided they have good technical training.
  - v. If one wants to establish himself at the top in the 8000 m Cross-country race, it is necessary to have a best time of 14:30 minutes for 5000 m on the track" (36: 2).

<sup>8</sup> Poly-athlete is an athlete competing in a multi discipline sport.

<sup>9</sup> Production of excess acid: a condition in which there is abnormal production of stomach acid, usually associated with the formation of a peptic or duodenal ulcer.

<sup>10</sup> Relating to voluntary muscle movement

<sup>11</sup> Brisk physical activity requiring the heart and lungs to work harder to meet the body's increased oxygen demand. Aerobic exercise promotes the circulation of oxygen through the blood.

39. The best performances in the five disciplines rise continuously with regard to the athletic ability of the competitors each year. Improvements are especially noticeable in the long distance throwing, obstacle race and the endurance of the competitors. However, the winner will not be a specialist in one or two disciplines, but only the perfect poly-athlete, who reaches the highest possible performance in all five disciplines.

## DISCIPLINES

40. The five disciplines will be discussed as follows:

- a. Shooting. This exercise is conducted in two parts, being precision fire, 10 rounds in 10 min and rapid-fire 10 rounds in 1 min over a distance of 200 m. Each exercise will be fired from the prone position with the standard service rifle. The maximum score that can be obtained is 200 points. This exercise will be completed in battledress to simulate battle zone conditions. See Fig 16.



*Fig 16: Shooting with Battledress in the Prone Position*

- b. Obstacle Running. The standard NATO obstacle course is used consisting of 2 obstacles in a set sequence over a distance of 500 m. The test will be completed with battledress. It is to be noted that each obstacle can be linked to a specific battle skill needed in the operational theatre. This event is the single most important skills development tool for battlefield manoeuvre on foot. The exercise must be completed in battledress and is of critical importance in the smallest tactical unit to foster teamwork and practice leadership skills. Fig 17.



***Fig 17: Obstacle Running in Battledress***

- c. Obstacle Swimming. The obstacle swimming exercise takes place over a distance of 50 m crossing four prescribed obstacles in any swim style. This event can be seen as an essential skill for survival especially seen in the light of the deployment of SANDF soldiers in central Africa. The test should be completed in uniform without boots. At first the exercise will be completed in swimwear and systematically upgraded to the tactical crossing of water obstacles in battledress. See Fig 18.



***Fig 18: Obstacle Swimming Benefits***



- d. Throwing. The throwing event consists of two parts, being an accuracy discipline and a distance discipline. Each competitor will attempt in four min four distances with four grenades each. He or she then has two minutes to throw three grenades as far as they can of which the longest distance will be measured as the distance throwing result. The members will be dressed in battledress in order to simulate battle conditions. See Fig 19.



***Fig 19: Throwing of Grenades***

- e. Cross-Country Running. The competitors run cross-country over a distance of 8 km (females 4 km). Soldiers will complete this exercise in combat boots, combat trousers and T-shirt. It could also be adjusted for combat units to battledress, which will include rifle, webbing and helmet, see Fig 20.



***Fig 20: Cross-Country Running in the Most Advance Form for Combat Units***



**CRITICAL QUESTION 3:  
WHAT WOULD BE THE TASKS AND CHARACTERISTICS OF THE SA ARMY INF  
SOLDIER OF 2020?**

41. In the words of Clausewitz “ The first, supreme, the most far-reaching act judgement that the statesmen and commander have to make is to establish by that test the kind of war on which they are embarking: neither mistaking it for, nor trying to turn it into, something that is alien to its nature”(8: 76).

42. The SA Army Vision 2020 summarise the characteristics of the environment / battlefield as follows (49: 2-3):

- a. Multi dimensional battlefields.
- b. Non-linear conflict.
- c. Dualism of the African battlefield.
- d. Traditional conventional war.
- e. Asymmetric Battlefields in the African context.

43. At the same time it should also be kept in mind what the enemy’s aim and actions would be, and what would be required from the SA Army soldier of 2020. This is best said in British Defence Doctrine “To do something the enemy does not expect, is not prepared for, something which will surprise him and disarm him morally. To be always thinking ahead and to be peeping around corners. To spy out the soul of one’s adversary, and to act in a manner which will astonish and bewilder him” (67: 6).

44. In summary, the SA Army Inf soldier of 2020 will be a versatile soldier who will be able to adapt to the ever changing demands of mainly the African theatre of war / peace mission with a limited role outside Africa. He or she will have to be able to fight the three-block war. In the first block the conducting humanitarian aid, in the second block the Peace Mission soldier and in the third block the Mid-intensity soldier (58: 1). See Fig 21 for an illustration of the SA Army Inf Soldier of 2020 as researched by the SANDF (58: 11)



***Fig 21: The SA Army Inf Soldier of 2020***

## TYPICAL TASKS

45. The following tasks have been identified through research by the author for the SA Army Inf Soldier of 2020:

- a. Conventional Infantry Tasks. It is clear that the Inf Soldier of 2020 will still have to be trained in the fundamental skills and that is found in the conventional phases of training. All other training is regarded as additional skills to the training package of the SA Army Inf Soldier in 2020 (6: 1).
- b. Peace Mission Specialist. It is a fact that the demands on Inf Soldiers will be ever increasing, especially in the light of the more prominent role the RSA will play in the regional security of Africa. This then gives rise to the requirement that soldiers will have to be able to operate in the following peace mission roles:
  - i. Peacekeeper. This role will place much more strenuous demands on the SA Army Inf Soldier of 2020. The soldier will have to be able to redirect his inherent strength to the role of adjudicator, ambassador and peacekeeper.
  - ii. Peace Enforcer. This activity will link in a lot of respects to the conventional training but each situation will require different forces using different tactics to enforce peace.
  - iii. Assisting in Civil Military Cooperation (CIMIC)<sup>12</sup> Projects.
    - (1) Assisting in Rebuilding Projects after War. It is essential to understand that soldiers will be on the scene of war. This entails that their mere presence gives them the opportunity to assist with immediate relief and rebuilding projects. The role of the Inf soldier is seen as, one of manual labour and the protection of civilian contractors. This then could mean tasks such as convoy protection, guarding of resources for the rebuilding projects and in some case the protection of VIP's.
    - (2) Assisting with Food Distribution Mainly the Guarding Thereof. This can be one of the most prominent activities in support of CIMIC operations, as was demonstrated in Somalia and brilliantly illustrated in the movie "Black Hawk Down"<sup>13</sup>. The fact that food distribution is critical to support stability in the path / aftermath of war, is it foreseen that the Inf Soldier will

<sup>12</sup> Civilian companies or organizations rendering assistance in the Theatre of War / Disaster. These could be governmental or non governmental.

<sup>13</sup> The militia takes control over the food supplied by the relief organisations by shooting the people who were to receive the food. In this case there was no protection for the organization that supplied the food aid. The US Forces witnessed what had happened but were not allowed to take charge of this situation.

also be the primary source to render protection for these relief organizations.

- iv. The Soldier as a Social Engineer. Apart from the traditional role that the soldier will have to fulfil as a combatant, Peace Support Missions will also demand the following roles from him or her (58: 2):

- (1) Soldier.
- (2) Deterrent.
- (3) Policemen.
- (4) Protector.
- (5) Mediator.
- (6) Negotiator.
- (7) Arbitrator.
- (8) Observer.
- (9) Helper.
- (10) Team Player.
- (11) Co-ordinator.
- (12) Humanitarian.

- c. Ambassadors for the RSA. The Inf soldiers will have to realise that they would be the ambassadors of the RSA and therefore they must always be aware of what they are doing and how they do things. Incidents as found in Burundi (BUR) and the Democratic Republic of the Congo (DRC) with regard to prostitution and drunkenness are not good for the image of the RSA. This inevitably means that the Inf soldier must show the highest integrity in his or her behaviour at all times.
- d. Limited Support to the South African Police Service (SAPS). The SAPS will always need assistance from the SANDF especially in operations such as border control and other high intensity operations (joint crime combating operations). This will mean that the soldiers will have to be extremely versatile in order to adapt to these unconventional tasks to assist the SAPS (15: 2).
- e. Participation in Multinational Exercises in the Humanitarian and Conventional Environment. The RSA needs to establish itself as a leader in Africa and this inevitably implies that the SANDF will be hosting and participating in international exercises. It also implies that the soldiers participating in these exercises will have to be highly skilled and well equipped to ensure that the image of the RSA is portrayed in a positive manner. These exercises will vary from Amphibious, to Airborne, to Conventional, to Peace Missions and Humanitarian Operations. It is also foreseen that more and more of these exercises would be conducted with Southern African Development Community (SADC) and African

Union (AU) role players to promote the aims of the African Standby Force. The SA Army Inf Soldier of 2020 will form the basis of all these exercises.

- f. The illustration (Fig: 22) below shows the different dimensions in, which the SA Army Inf Soldier of 2020 will have to operate.



*Fig 22: Illustration of Environment Complexity in which the Inf Soldier 2020 will have to Operate in*

## PERSONAL ATTRIBUTES

46. In analysing the tasks of the SA Army Inf soldier of 2020 the following characteristics are attributed to him or her:

- a. Technologically Well Advanced. The technology of the future that will assist the Inf Soldier of 2020 will be of such a nature that he or she will have to be able to operate in a technological environment such as the case will be with new weapon systems and aids which will facilitate his or her functioning. This will without any doubt also help to increase the effectiveness of the Inf Soldier of 2020.
- b. Versatility / Flexibility. The requirements of the modern battle zone will be demanding on the soldier and it will require that he or she is versatile and flexible. This will ensure his or her survival and will also demand from them to be resourceful in some cases in order to enhance the outcome of

a particular situation. This is especially applicable in the CIMIC environment.

- c. Mental and Physical Toughness. The ever-changing environments that the Inf Soldier of 2020 will have to operate in and also the more complex technology will require mental and physical toughness. This is one of those attributes that cannot be enhanced with equipment but can be improved through training. The author is of the opinion that the Inf Soldier of 2020 should have the fundamental ability to be mentally and physically tough. This quality should be part of the selection process of the Inf Soldier 2020.
- d. Emotional Intelligence and Controlled Behaviour. The stresses of the modern battle zone will be very severe, not only due to the advances of technology but also due to the complexity of it. It will call for an emotionally intelligent soldier who can control his or her behaviour. This quality will be a life-saving skill and could be especially important in religious and ethnic wars, which is heavily based on the emotions of the masses.
- e. High Sense of Awareness. Awareness of what is happening in the battle zone will be critical because of the complexity of it. The key to survival will be to recognise the dynamics of the battle zone timely, giving him or her the edge to make a lifesaving decision. It would also assist the Inf soldier in being considerate in his or her actions, especially in the Peace Mission environment.
- f. High Levels of Self-discipline and Integrity. The environment in which the SA Army Inf Soldier of 2020 will be utilised will require a soldier with high levels of self-discipline and integrity. This would be especially applicable to ensure impartiality on Peace Missions and in the conventional environment the quality of self-discipline. Self discipline and integrity is also the cornerstone on which the survival of every soldier depends.
- g. Good Communication Skills. One of the fundamental skills required from the SA Army Inf Soldier of 2020 will not only be communicating with his comrades but he or she will also have to be multilingual with regard to international deployments. The multilingual skill will have to be taught as part of the SA Army Inf Soldier 2020 training curriculum (10: 1).
- h. Tenacity. The environment of the modern battle zone will require tenacity of the SA Army Inf Soldier of 2020 to conduct his or her tasks. The technological advances of the era in which they operate in will level the battle zone and thus depending on the individual making the difference. The attribute of tenacity would be extremely helpful especially in the circumstances where he or she will operate under extreme pressure.
- i. Highly Skilled. The tasks that the SA Army Inf Soldier of 2020 will have to perform will demand that he or she will have to be highly skilled in their respective fields but they will also have to adapt to the ever-changing environment that they will operate in.



- j. Intellectually Developed. It would be required from the SA Army Inf Soldier of 2020 to make instantaneous decisions, which will require that a given situation be evaluated at short notice and acted upon. Furthermore the environment, in which he or she will operate, will be complex as it will be dictated by the technological advances typical of that time and the variety of tasks that the SA Army Inf Soldier of 2020 will have to execute.
- k. Highly Confident. The demands of the tasks at hand and the ever-changing environment that he or she will be operating in, will demand confidence in themselves and their abilities, since the SA Army Inf Soldier 2020 will operate for prolonged periods without supervision or in smaller groups such as VIP protection.
- l. Free from Chronic Illnesses and Injuries. The physical and mental demands on the SA Army Inf Soldier of 2020 will be so severe that he or she will have to be in good health and will therefore not be able to cope if he or she is not in good health. This would obviously mean that he or she would have to live a life of high moral values and healthy social behaviour.
- m. Cultural Awareness and Judgement. He or she must be sensitive to the cultural backgrounds of the population in the theatre of operations. The centre of gravity of complex emergencies is most often outside the military domain and based on cultural issues. Increasingly intervening forces will be required to go into post-conflict reconstruction after the cessation of hostilities (58: 3).

47. The SA Army Inf Soldier of 2020 can be summarised as follows in the words of Captain George Skyeck of the U.S. Army (70: 5):

“I was that which others did not want to be.

I went where others feared to go, and did that which others failed to do.

I asked nothing from those who gave nothing, and reluctantly accepted the thought of eternal loneliness...should I fall.

I have seen the face of terror; felt the stinging cold of fear; and enjoyed the sweet taste of a moment's love.

I have cried, pained and hoped... But most of all I have lived times that others say were best forgotten.

At least someday, I will be able to say that I was proud of what I was.....a SOLDIER.

”

#### **CRITICAL QUESTION 4: WHAT ADVANTAGES IN FORCE PREPARATION ARE THERE FOR THE SA ARMY INF SOLDIER OF 2020 IN MAKING USE OF MILITARY PENTATHLON AS A FORCE MULTIPLIER?**

48. Explaining the value of Military Pentathlon in force preparation of the SA Army Inf Soldier in 2020 is best said in the words of Lt Col Ribas<sup>14</sup> of the Brazilian Armed Forces “The modern combatant, as well as the elite athlete, depend on the adequate psychological preparation that will allow him/her to work under pressure, enduring pain, to concentrate on tasks, to have persistence, displaying a positive aptitude and participating in competitions or missions, feeling calm and secure. In this fashion, we see in military competitive sports of high performance an economical solution to military training, comparable to the harsh realities of combat, since both demand equivalent emotional, psychological, and physical conditioning. Military sportspeople may be trained to conquer given objectives giving the most of themselves in swimming pools, courts, fields, tracks, as well as in modern operation terrains. Thus it is suggested, that the emotional behavior may be trained and evaluated through competitive sports” (37: 24).

49. Understanding the sequence of events in the preparation of soldiers is also extremely important to ensure that effective training takes place. Dr van Dijk<sup>15</sup> of The Royal Netherlands Army illustrates the phases of mission ready training and importantly the demobilization of soldiers after missions as indicated in Fig 23. The author however adjusted the illustration to fit the SANDF profile. It is clear that Military Pentathlon can play a major role in the pre-mission and post-mission phases with regards to the development and maintenance of skills, but can also to a limited extent, assist with the preparedness of soldiers whilst they are on missions.

50. Pre-mission training entail obtaining / maintaining of skills and precisely this makes Military Pentathlon an excellent training aid, because the soldier learns skills in a competitive environment and whilst doing so, increases his fitness levels. Post-mission training on the other hand will be utilized to maintain / improve skills and fitness levels. During the mission phase, disciplines such as shooting, throwing, swimming (if swimming pools are available) and cross-country can be utilized to maintain and improve the levels of skills and fitness of the soldiers.

51. Military mission planning takes place in three phases as indicated in Fig 23 and clearly illustrated that both general fitness and task specific training shows great potential for Military Pentathlon to be of valuable assistance in all phases of the mission planning.

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<sup>14</sup> Lt Col P.R. Ribas of the Brazilian Armed Forces has a Master of Science Degree in Sport Psychophysiology (37: 1).

<sup>15</sup> Dr M.J. van Dijk is from the Royal Netherlands Army Training Medicine and Training Physiology (65: 1)

## Training and Phasing of Mission Training

1. Three phases in military mission planning:

- a. Pre-Mission Training
- b. Mission
- c. Post-Mission Recovery

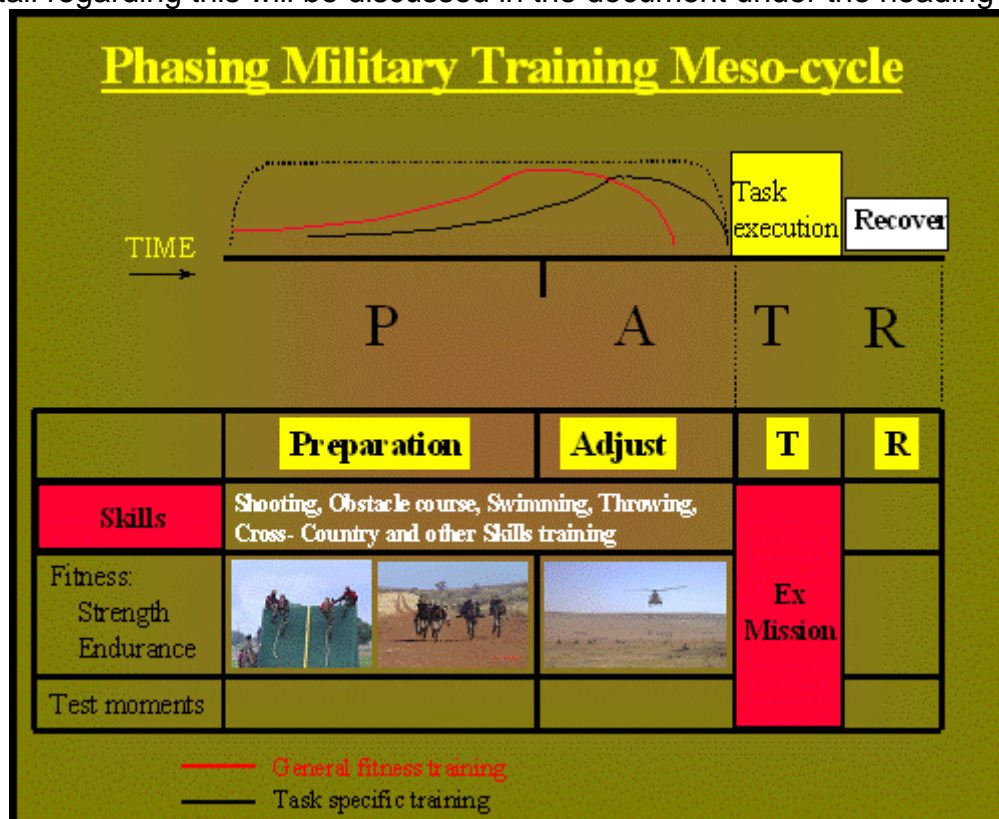
2. Training phasing aimed at specific events/actions:



- a. Preparation
- b. Adjust - Task/Role Specific
- c. Field Exercise / Mission
- d. Recovery

**Fig 23: Training and Phasing of Mission Training**

52. The four phases of training making use of the Meso-cycle<sup>16</sup> as a guideline shows the best opportunity for Military Pentathlon to be utilized as a force multiplier (see Fig 24). Detail regarding this will be discussed in the document under the heading of Skills.



**Fig 24: Phasing of Military Training**

<sup>16</sup> A repeated pattern of phases of micro cycles makes up a Meso-cycle, and a season or macrocycle of training may consist out of a repeated set of Meso-cycles (16: 1).

## SKILLS

53. It is clear from research done by the author that the different disciplines of Military Pentathlon can contribute to the force preparation of the SA Army Inf Soldier of 2020 as follows:

- a. Shooting. This skill is essential for the Inf Soldier because he or she will always be issued with a rifle in order to carry out the mission assigned to him or her. Accurate shooting is essential for the survival of the infantry soldier and also prevents unnecessary accidents / injuries, especially in the ever increasingly changing environment the soldier will find him or herself in for example operations in built-up and crowded areas.
- b. Obstacle Running. This is an excellent exercise to prepare the soldier for the more difficult areas he or she sometimes will have to negotiate in order to reach his or her destination. It will also improve anaerobic<sup>17</sup> fitness, muscle endurance, muscle strength and agility. All the obstacles are linked to a specific basic battlefield skill and place extremely high physical demands on the fitness / concentration levels of the soldiers, but are also a unique exercise in the sense that whilst physical fitness is practiced the soldier will also practice some essential battlefield skills.
- c. Obstacle Swimming. A very important exercise to enable the Inf soldier to acquire the basic survival skills in water, which is related to the crossing of water obstacles that he or she might encounter on their way. This also improves anaerobic fitness, muscle endurance and lung capacity, as well as decreases fear of water. This is the single most important skill towards nation building in the RSA because of the serious challenges most of the RSA population have with regard to swimming skills.
- d. Throwing. This will improve shoulder and upper body strength, flexibility, throwing techniques as well as hand-eye coordination. The skill of throwing is not only applicable to the throwing of grenades, but also other throwing activities such as ropes or personal kit to a safe and dry area, etc. This skill will be essential where soldiers operate in built-up areas when it is needed to identify targets to aircraft or to penetrate / neutralise problem areas.
- e. Cross-Country. This is the most important facet of an Inf soldier's training programme. It will improve aerobic fitness, which is the base from where the other facets of fitness (strength, endurance, flexibility and power) can be developed. The reason why cross-country running is better for the Inf soldier than running on tar, is to improve their proprioception<sup>18</sup> and prepare the body for uneven surfaces and obstacles. During cross-country running, the Inf soldier never gets a steady rhythm which makes it more tough than road running, but for the soldier it is perfect to train on

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<sup>17</sup> Not needing oxygen: living or taking place in the absence of oxygen, especially not requiring oxygen for metabolism (71: 1)

<sup>18</sup> A sensory nerve ending in muscles, tendons, and joints that provides a sense of the body's position by responding to stimuli from within the body (68: 1)



terrains similar to their working environment. Cross-country also makes the Inf soldier stronger than road running because it gives them more endurance (physically as well as mentally) and also improves their cardiovascular<sup>19</sup> fitness enormously (4: 2).

## PHYSIOLOGICAL EFFECTS

54. The principles of application and physiologic effects obtained by training in the Military Pentathlon environment are Aerobic capacity, Strength and Speed. Each principle will be discussed in brief (25: 22 - 24):

- a. Aerobic capacity. The increase of aerobic capacity will vastly improve the SA Army Inf Soldier of 2020 ability to perform on the battlefield by:
  - i. Increasing the capacity of the heart to pump blood (Heart hypertrophy<sup>20</sup>).
  - ii. Increasing higher tolerances to debit oxygen, which improves energetic reserves.
  - iii. Increasing of alkaline reserves in blood.
  - iv. Maintaining a higher work rhythm for a longer time.
  - v. Larger capillarisation<sup>21</sup> in tissue level (small veins in body tissue).
  - vi. Increase of muscular irrigation and blood volume.
- b. Strength. The quality and the advantages of strength is a fundamental to good soldiering. It has the following benefits:
  - i. Increase of the transversal section<sup>22</sup> of the muscles, muscular fibre, resistance of muscles, neuromuscular influx<sup>23</sup> and neuromuscular capacity<sup>24</sup>. Supporting the characteristics of endurance, power, agility and high fitness levels.
  - ii. Larger capacity to move heavier loads. Supporting the characteristics of versatility, power and agility.
  - iii. Larger possibility of self-displacement. Supporting the characteristics of power and agility.
- c. Speed. The fact that speed is a basic building block of Inf manoeuvre on foot creates the following benefits:

<sup>19</sup> Relating to both the heart and the blood vessels (26: 676)

<sup>20</sup> Enlargement by cell growth: a growth in size of an organ through an increase in the size, rather than the number, of its cells (75: 100)

<sup>21</sup> Thin blood vessel: an extremely narrow thin-walled blood vessel that connects small arteries (arterioles) with small veins to form a network throughout the body (75: 1)

<sup>22</sup> Crosscut, cross-section, end grain section (75: 1)

<sup>23</sup> Influencing the mass arrival of both influence on nerves and muscular tissue (68: 1)

<sup>24</sup> The capacity of influencing both the nerves and muscles (68: 1)

- i. A rapid conception of the motor image of the brain. Supporting the characteristic of high levels of alertness and instinctive behaviours.
- ii. An improvement in the transmission of the nervous pulses in the muscle. Supporting the characteristics of good reflex.
- iii. The improvement of anaerobic work. Supporting the characteristics of endurance.
- iv. A qualitative longitudinal increase of the muscles. Supporting the characteristics of endurance, power and tenacity.
- v. The automatism of specific gestures. Supporting the characteristics of endurance.
- vi. An improvement of muscular potency, heart hypertrophy (anaerobic work) and of the antagonistic relaxation of the muscles. Supporting the characteristics of power.
- vii. Faster movement / reaction of muscles. Supporting the characteristic of agility and speed.

## PSYCHOLOGICAL

55. The psychological effect that an activity such as Military Pentathlon has on the soldier according to Ribas, who did research for eight years since 1996 where it was established that there is a clear relationship and comparison between the emotional behavior of athletes practicing in sports and soldiers in combat.

- a. Military Pentathlon can contribute to the training of both soldiers and athletes by introducing modern concepts of Sports Psychology by simulating specific skills needed to conduct successful operations (37: 2).
- b. Much emphasis is put on Cognitive Interventions<sup>25</sup>, which can be defined as “a program that prepares one psychologically by utilizing different techniques providing learning, maintenance and psycho-physiological development” (37: 2).

56. Value Added Training Benefits Related to Training with Military Pentathlon as a Force Preparation tool. It is important that all activities should be conducted in the smallest fighting element to develop the characteristics of the SA Army Inf Soldier of 2020. Some related emotions and emotional behaviour in Military Pentathlon could be identified and developed for the operating environment of the SA Army Inf Soldier of 2020. These fields have been identified as psychological preparation, importance of emotions, efficiency of leadership and the role of emotions (37: 9 – 17).

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<sup>25</sup> The term Cognitive refers to the manner in which people learn, structure, retain and use knowledge. The term “Cognitive Interventions” refers precisely to the psychological programs that offer training, counseling and coaching. (37: 2).

- a. Psychological Preparation. Psychological training refers to both the training of psychic capacities and self-control, which are in this case essential skills for the survival of the SA Army Inf Soldier 2020.
- i. Psychic capacities refer to the mental and concentration abilities which are trained and which would be extremely useful on the battlefield.
  - ii. Self-control means the motivation of psycho-regulation, which would be important on the battlefield.
  - iii. The psychological variables that can be identified and trained at all times whether in a sportive or military context whilst participating in Military Pentathlon are the following:
    - (1) Training of psychic abilities enhances leadership techniques, concentration, focus, determination, attention and the development of motor abilities<sup>26</sup>.
    - (2) Training of self-control enhances emotional balance, motivation, confidence and stress control.
  - iv. Through the Cognitive System that promotes the human capacity of adapting to the environment (shooting, obstacle running and throwing), the Inf Soldier of 2020 will learn to organize and control his or her behavior in situations that bring uncertainty and insecurity. Therefore, the Inf Soldier's response to a given stimulus in sports is highly influenced by his/her emotional behavior and the subjective analysis of a given situation. This can then directly benefit the soldier on the battlefield.
- b. The Importance of Motivation. Military Pentathlon can contribute by means of its competitive nature attributed to the fact that people that are dedicated and motivated usually form teams that are winning. The definition, according to Dietmar Samulski, 1995, "Motivation is an active process, that is intentional and focused on a specific goal, and which depends on the interaction of personnel (intrinsic) and environmental (extrinsic) factors" (37: 12). Motivation is consequently divided into two sections, having;
- i. an individual that has an energetic component which depends on the physiological level of conditioning and;
  - ii. a behavioral component, which depends on the intentions, interests, motives, and goals that an individual plans to meet. The influence of emotional health and the will to perform on actual performance is critical.

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<sup>26</sup> Relating to muscle activity, especially voluntary muscle activity, and the consequent body movements (71: 1)

- c. The Efficiency of Leadership in Accomplishing Tasks. Leadership is defined as “the capacity to act on a person or group to achieve a goal under any circumstance”(37: 13). Therefore, the leader must have the following attributes and can be practiced whilst doing Military Pentathlon as part of Force Preparation:
- i. Personality with the greatest number of behavioral traits that influence the group to recognize the leader's competence. This aspect can be best tested in the obstacle running and throwing events of Military Pentathlon.
  - ii. Personal motivation will influence the group and motivated individuals will adopt the desired behaviors, which could be linked to the obstacle run and cross-country.
  - iii. Communication between the leader and the group must foster a communication channel that is accessible to all, which can be actively practiced in all of the disciplines of Military Pentathlon.
  - iv. The leader must demonstrate empathy / affinity with all, in order to perceive the group dynamics, incorporating central rules and values and having the capacity to answer to the group's needs. This is especially a good opportunity to build trust in the groups and is best practiced whilst doing the obstacle running.
  - v. A graphic illustration on how the elements of leadership interact with each other can be seen in Fig 25. It is important to notice that these activities can all be practiced whilst doing Military Pentathlon and is especially relevant in the obstacle running event.



*Fig 25: The Process of Leadership*



- d. The Role of Emotion in Military Pentathlon and Combat. In relation to the emotional behavior, one must understand the three-dimensional system of emotions. According to Hackfort, 1993, Emotion “is a complex system which inter-relates cognitive processes: psychic, physiological and social system” (37: 15). The relation between emotion and outcome depends on these three factors. To conquer goals it is clear that emotional balance is indispensable. The illustration in Fig 26 best summarizes the role of emotion in doing Military Pentathlon and Combat.



*Fig 26: The Importance of Emotional Balance*

- e. Emotional States. In the sports arena, research has investigated the positive emotional states that are present amongst successful athletes and professionals. Two characteristic behaviors within these groups were identified (37: 17):
- i. The “flow-feeling” (sensation of fluidity) which is a sensation of happiness, identified with the activity of concentration. The intrinsic motivation stood out that playing or competing for pleasure and fun provokes this “flow-feeling” and helps obtain success. This underlines the fact of using competition, repetition and enjoyment to imbed the basic skills that the SA Army Inf Soldier of 2020 will need.
  - ii. The “winning-feeling” (sensation of victory) to demonstrate that the emotional states of the winning sportsperson displayed. Characteristics of which can be directly linked to the characteristics of the SA Army Inf Soldier of 2020:
    - (1) Concentration protects oneself from external disturbing stimulus, which is essential on the battlefield.

- (2) A greater tolerance to pain and not tiring, feeling frail or in pain in order to promote endurance, which is indispensable in combat.
    - (3) A shift in the perception to focused attention on the given task, which will ensure that the awareness levels are much higher, especially in high intensity combat.
  - iii. Consequently, it is not a specific situation whilst doing Military Pentathlon that determines the emotion, but the subjective evaluation the person makes at the given time.
  - iv. The interaction of the three factors mentioned is what determines the positive or negative effect resulting from the emotional behavior.
  - v. The psychological acting on the physiological will generate positive or negative sensations of discomfort like fear, perspiration, nervousness, etc.
- f. Strategies. The Psychological Strategy to acquire Emotional Control whilst doing Military Pentathlon will require:
- i. An efficient physical / technical / tactical preparation to function optimally.
  - ii. Obtaining detailed information about the opponent (thus avoiding the fear of the unknown).
  - iii. Utilizing psychological strategies (self-regulation), relaxation, motivation and stress management to be confident on the battlefield.
  - iv. Whilst doing Military Pentathlon it is understood that the psychological strategies of intervention as a concept that supports the training of diverse emotional abilities utilize specific techniques, such as:
    - (1) Visualization and Mental imagery, which will assist with the soldier's development of mental toughness.
    - (2) Anxiety control, which leads to confidence and emotional control of the soldier.
    - (3) Relaxation techniques, which will assist the soldier with his or her awareness on the battlefield.
    - (4) Psycho-physiological<sup>27</sup> control with biofeedback<sup>28</sup>.

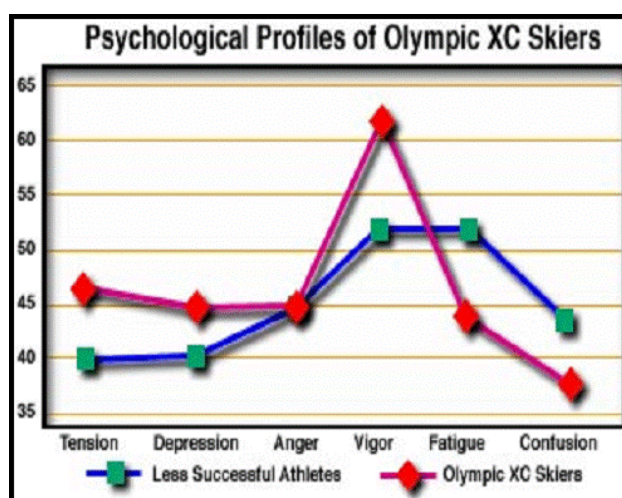
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<sup>27</sup>It is the branch of physiology dealing with the relationship between physiological processes and thoughts, emotions and behavior (68: 1).

- v. Whilst doing Military Pentathlon the techniques described above can be utilized during physical / technical / tactical training, producing the desirable differential between a winning and dead combatant. Well-trained winning teams currently utilize strategies that focus on mental training and combatants can also use this with great effect.
- vi. These techniques prepare the human being to face challenges with determination, courage and tranquility, and in the process improve the battle skills of the SA Army Inf Soldier of 2020.

57. “There are certain psychological profiles present in people with winning personalities, as we can observe in this study that demonstrates the profile of a well-prepared athlete” (37: 22). These are: drive, decisiveness and determination, which are critical components of the SA Army Inf Soldier of 2020.

58. Successful athletes tend to be vigorous and have little tension, depression, confusion, anger, and fatigue, a combination known as the “Iceberg Profile”. It is also important to note that only the factor vigor is high and all the others factors such as stress, depression, anger and fatigue are low. According to the University of Montana (USA) the Iceberg profile of Elite Cross-Country Skiers showed in comparison to non-athletes lower levels of tension, lower levels of depression, about equal levels of anger, less fatigue and confusion (73: 1). It needs to be pointed out that in many regard’s Military Pentathlon and Cross-Country ski show remarkable similarities in physical and psychological profiles. In fact several of the European nations use cross-country (x-c) ski as a bases for fitness training and other related benefits in the off-season. “The Iceberg profile of a successful x-c skier is formed by vigor being above the mean of the population and tension, depression, anger, fatigue, and confusion being below the mean of the population. Notice that the profile (Fig 27) looks like an iceberg, with all the negative traits below the surface (population norms) and the one positive trait (vigor) above the surface”(73: 1). This makes the psychological benefits derived from using Military Pentathlon as a Force Multiplier of the SA Army Inf Soldier of 2020 indispensable to the SANDF. Also see in Fig: 27 the difference between high profile competitors and less successful-competitor’s (73: 1).



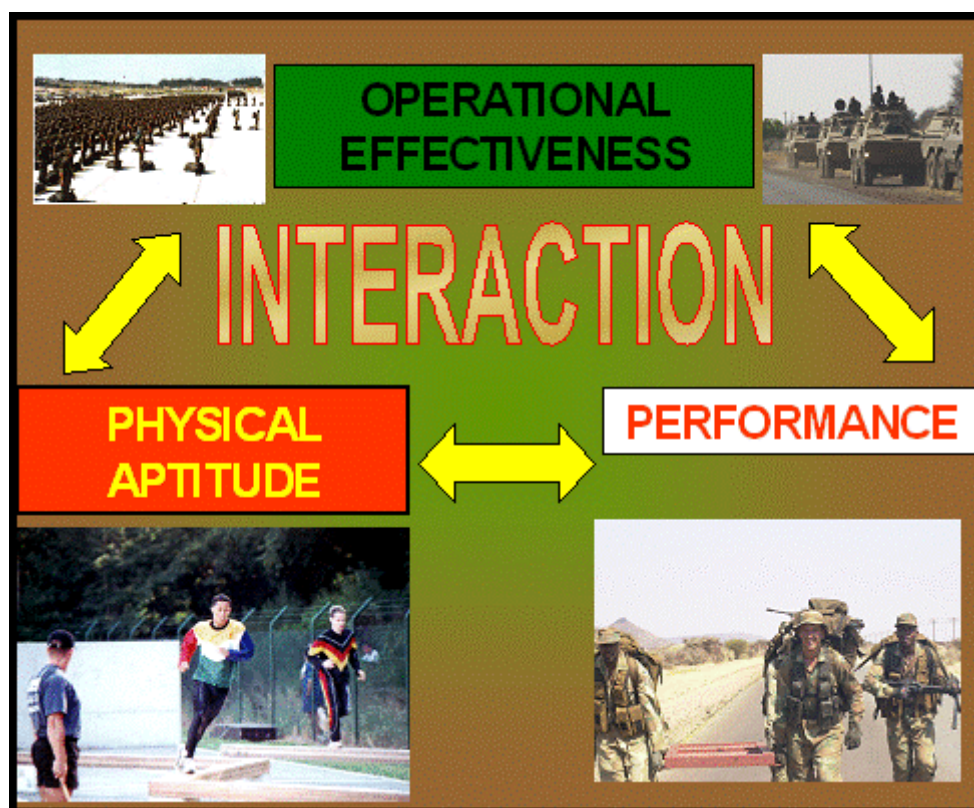
**Fig 27: Comparison of Psychological Profiles of Olympic XC Skiers**

<sup>28</sup>Physiological control technique: the use of monitoring devices that display information about the operation of a bodily function, for example heart rate or blood pressure, which is not normally consciously controlled. This helps a patient to learn to control the function consciously (68: 1).

59. The personality profile of female athletes shows that as more women compete in sport, it's important to understand the personality profile of female athletes. The successful female athletes seem to differ significantly from the "normative" female in terms of personality profile. Compared with non-athletes, female athletes tend to be more achievement-oriented, independent, aggressive, emotionally stable and assertive (73: 1).

60. The fact that Military Pentathlon as a Force Multiplier can dramatically assist with especially the female component in preparing them for their future task cannot be overlooked as explained in par 57 – 59.

61. Thus the correlation between the aspects of operational effectiveness, physical aptitude and performance in developing the ideal capacities to execute the tasks of the SA Army Inf Soldier of 2020 is of critical importance, Fig 28 clearly illustrate this.



*Fig 28: Capacities needed for the optimal performance of the Inf Soldier 2020*

## INTERNATIONAL TRENDS

62. After extensive research the following information was obtained. It must however be pointed out that the information gathered from The Royal Netherlands Army, the United States of America and the United Kingdom was the most relevant to the aim of this paper.

- a. Algeria. The Algerians (ALG) use elements of Military Pentathlon as training aids but use other combat sports extensively to enhance their training. The use of physical training and swimming as part of daily routine is also very prominent in their training curricula (3: 7 – 9). It must be pointed out that Military Pentathlon in the SANDF is in fact classified as a combat sport.



- b. Austria. The Austrian Armed Forces (AUT) use elements of Military Pentathlon in their current training curricula. These include shooting, obstacle running, swimming and running (50: 2-34).
- c. Czech Republic. The Czech Republic (CEZ) also uses elements of Military Pentathlon in its training curricula to enhance the skills of their soldiers. Their Military Pentathlon team however travels once every three months to Austria to train on the Military Pentathlon obstacle course (76: 1).
- d. Denmark. The Danish Armed Forces (DEN) are using a similar system as Military Pentathlon to determine basic fitness and skills levels but use the obstacle course extensively for skills / fitness training (13: 1).
- e. Germany. The German Armed Forces (GER) do not use Military Pentathlon as a complete discipline to train their soldiers but elements thereof are used in the current training curricula. These are shooting, obstacle running, swimming and running (33: 1).
- f. Lesotho. The Lesotho Defence Force (LES) is the only other Force in SADC that has an obstacle course facility to conduct Military Pentathlon. The training curriculum however does not include Military Pentathlon as part of their training. This however does not deter them from producing good athletes in the African context of Military Pentathlon (76: 1).
- g. Norway. Points loading are exactly the same for Military Pentathlon as apposed to other generic military subjects for cadets under training in the Norwegian Armed (NOR)(13: 1).
- h. Pakistan. Although Pakistan (PAK) does not use Military Pentathlon as a force preparation aid they do make use of some elements like shooting, swimming and obstacle courses which is an integral part of their training curricula. The Military Academy uses the time whilst junior officers are on course to qualify them in physical intensive sports to equip their soldiers with additional skills such as diving, parachuting, paragliding and skiing (2: 1).
- i. The Netherlands. The Royal Netherlands Army (NED) uses Military Pentathlon as a basic proficiency test for combat soldiers. By determining the level of competence in this manner it ensures that they test skills and fitness at the same time. This saves time and gives the commander of the particular unit the opportunity to determine the competency of his unit in relation to the basic skills / fitness needed on the battlefield. A system was introduced to reward performance based on age groups and different levels of competency. This ensured that individuals and organizations competed for the highest levels of proficiency (57: 3 - 19).
- j. United Kingdom. The United Kingdom (UK) has concluded, after the Falklands War in 1982 and with their resent involvements in Afghanistan and Iraq, that "British Soldiers would not have been able to complete

their objectives without adequate battle conditions preparation in training. The British also realized that the purpose of physical conditioning is to develop combat stamina (70: 1). In this regard Military Pentathlon can be extremely valuable.

- k. United States of America. The United States of America (USA) makes use of a different form of Military Pentathlon to test their abilities in different skills on a competition bases and this is especially successful in the Reserve Force Component. It must however be stated that Military Pentathlon as a complete discipline does not form an integral part of their training program. The USA does however make use of the elements of Military Pentathlon for the training of their soldiers. A comprehensive database is maintained by the U.S. Army centre for lessons learnt (call) from previous military activities. According to Capt Robert Murphy, Actual Operations Branch, CALL, the U.S. Army's official After Action Review for the recent Operation Anaconda in Afghanistan in 2002 concludes: "The reality is that the Army Physical Training Test (APFT) is a sports-oriented test not a combat-oriented test of physical fitness. This is a violation of the most basic fitness principles which is to train for the specific tasks to be done. What we need is an APFT that will measure combat physical fitness and then encourage the development of combat physical fitness by what we do during daily Physical Training (PT)" (70: 4-6). In this regard they have concluded that obstacle course training is an essential part of Battle-Focused Physical Training (BFPT). BFPT is designed to incorporate six steps and is focused on mission training:
  - i. Step 1. Determine the individual tasks that support your unit's Mission-Essential Task List (METL).
  - ii. Step 2. Determine the physical requirements of each task.
  - iii. Step 3. Determine the exercises which will develop those requirements.
  - iv. Step 4. Determine the secondary benefits and resource requirements of these activities. A corner stone to this phase is obstacle course training.
  - v. Step 5. Develop a mission / METL-based evaluation criteria. The basis of this phase is to combine skills and physical fitness in a single test of which the obstacle course is an essential part.
  - vi. Step 6. Develop a physical training plan which accomplishes the unit goals.

63. Due to the fact that the elements of Military Pentathlon forms the basic building blocks of the training curricula for soldiers worldwide it is concluded that Military Pentathlon could be a useful training aid to enhance the skills and fitness levels of the SA Army Inf Soldier of 2020 for mission specific training.

## CRITICAL QUESTION 5: WHAT IS THE STATUS OF MILITARY PENTATHLON CAPABILITIES IN THE SA ARMY?

### FACILITIES

64. It is essential to understand that the current capabilities within the SANDF need to be reviewed in order to support the fact that Military Pentathlon can be used as a force multiplier for the force preparation of the SA Army Inf Soldier of 2020.

65. Currently the SANDF has a large amount of the infrastructure, which could be used in the training of the SA Army Inf Soldier of 2020, see par 32.

66. Through the utilization of municipal swimming pools extensive savings can be obtained wrt the swim training especially in the maintenance of it. The following venues do not have obstacle courses, but all the other activities of Military Pentathlon can be practised at the current facilities at their disposal in the military bases or municipal areas:

Ser No	Venue	Year Constructed	Shooting Manual	Obstacle Course	Obstacle Swimming	Throwing	Cross Country
	a.	b.	c.	d.	e.	f.	g.
1	Pretoria (Planned)	2006	Yes	Yes	Swimming pool only	Yes	Yes
2	2 SAI Bn (Zeerust)	Planned	Yes	No	Make use of town pool	Yes	Yes
3	4 SAI Bn (Middelburg)	Planned	Yes	No	Make use of town pool	Yes	Yes
4	7 SAI Bn (Phalaborwa)	Planned	Yes	No	Make use of town pool	Yes	Yes
5	8 SAI Bn / 61 Mech Bn (Upington)	Planned	Yes	No	Make use of town pool	Yes	Yes
6	9 SAI Bn (Cape Town)	Planned	Yes	No	Make use of town pool	Yes	Yes
7	14 SAI Bn (Umtata)	Planned	Yes	No	Make use of own pool	Yes	Yes
8	Combat Training Centre (Lohathla)	Planned	Yes	No	25 m pool	Yes	Yes
9	DoD Mobilization Centre (Bloemfontein)	Planned	Yes	No	Build swimming pool to verify competency prior to deployment	Yes	Yes

### PERSONNEL

67. No organization or activity can take place without the involvement of people. It is thus of critical importance that all personnel who are involved with Military Pentathlon must have the knowledge to manage, facilitate and execute its responsibilities.

68. In this regard several members have been trained but the training of the masses will need priority. The principle to be followed is that all the coaches (instructors) and administrators are trained in the functioning / management of Military Pentathlon as a training aid. This activity is already partially addressed by the current Physical Training Instructor course of the SANDF, in that Military Pentathlon is presented as an integral part of the course (59: 1).

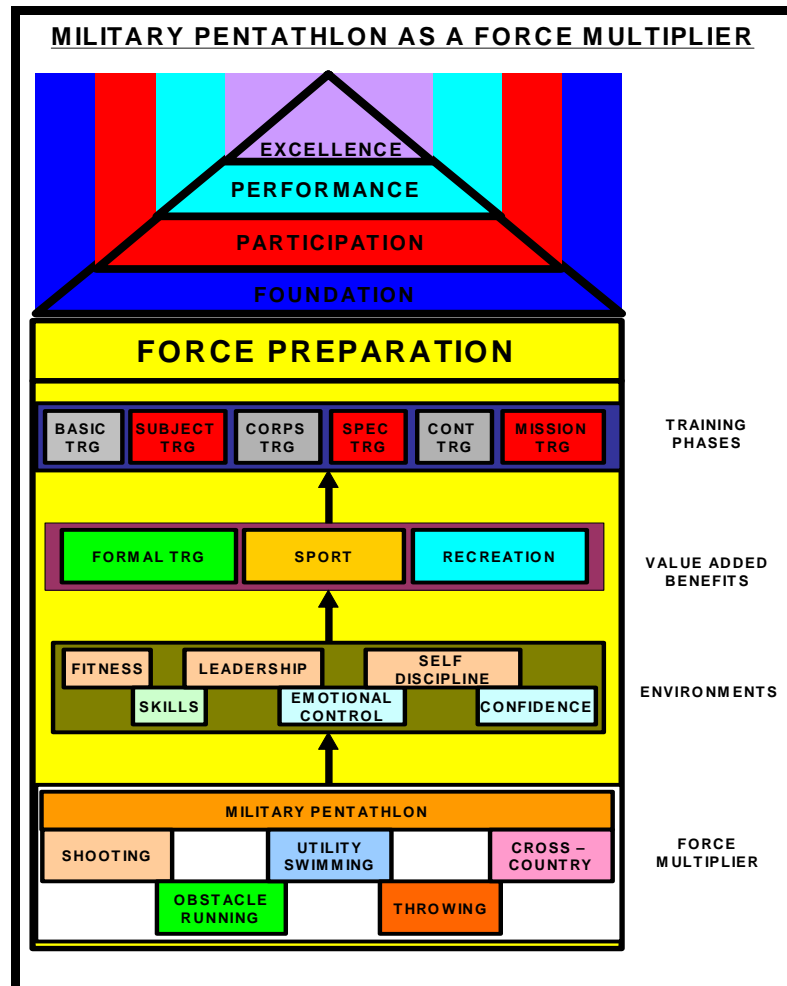
## DOCTRINE AND POLICY

69. The SANDF has several policies, which promulgate and regulate training with regard to skills and physical fitness. The process of training however seems not to be integrated and addresses the following aspects as single entities:

- a. The basic Physical Training (PT) policy describes the exercises to be done during basic training. The PT policy regulating the rest of the SANDF tests fitness levels and not skills. However, it does not take into consideration the fact that general fitness linked to games such as Military Pentathlon could be beneficial to the manner in which Military Pentathlon could be linked to fitness and skills. (39: A1 – A20 and 45: 22 - 30).
- b. The Musketry training and coaching manuals focus on the basic skills needed for the Inf Soldier and the awarding of proficiency badges. This however, could be integrated with a proposal to award a proficiency badge for the levels of skills obtained in Military Pentathlon. The use of the electronic targeting simulator must not be under-estimated as it could be used to good effect to improve the skills of the SA Army Inf Soldier of 2020. This system is not limited to weather as well as instructor fatigue and is much more cost effective for training (42: 1 – 31, 40: 6 – 11 and 45: 4 - 8).
- c. Swimming skills is the single most important discipline and needs to be addressed urgently. It is a fact that only a limited number of Inf soldiers can be regarded as water safe and an even smaller number can swim. This however, is now addressed by means of the Combat Water Safety training. It is however, possible to integrate this training with the Military Pentathlon discipline of obstacle swimming. By doing so, members could gain the confidence to get into the swimming pool, be able to have the confidence to put his/her head under the water, learn to cross obstacles in the water and finally gain the confidence needed on a competition basis. The skill of crossing rivers or other similar obstacles in combat situations is clearly defined in training curricula. Military Pentathlon as a vehicle relating to swimming will assist the SANDF to ensure that all soldiers comply with the regulation to water safety for international deployments like Peace Missions and humanitarian aid such as flood relief in Mozambique. (47: 3 –14, 48: 1 – D1 and 43: 27).
- d. Grenade training is well regulated by training curricula but still remain a very dangerous activity. However, it is one of the most important skills that the SA Army Inf Soldier of 2020 will need in being clinically accurate in the utilisation of grenades whether smoke for target indication or explosive grenades for the penetration of house / bunkers / trenches (46: Chapter 1 – 4). The Military Pentathlon discipline of throwing, consisting out of two events being accuracy and distance throwing, which could ensure that the skills required for the SA Army Inf Soldier of 2020 could be acquired on the basis of competition and repetition. It is proven that from all the disciplines of Military Pentathlon this is the discipline that needs the best skills relating to emotional control, accuracy and ultimately self-discipline.

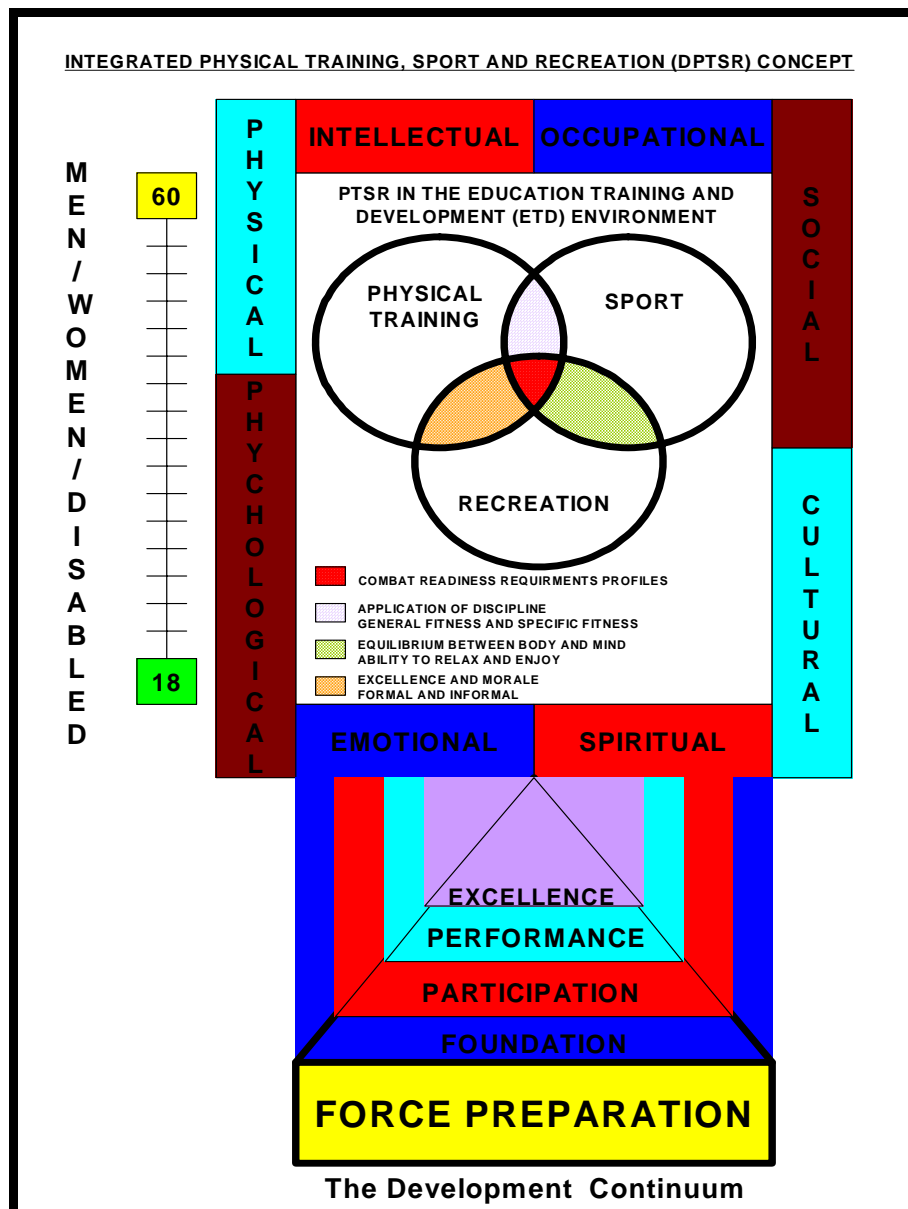


- e. Military Pentathlon as a force multiplier can be described as a training aid rendering a service through the different environments of Physical Training Sport and Recreation (PTSR), with the value-added benefits assisting the complete array of training required for missions. This is clearly illustrated in Fig 29.



*Fig 29: Military Pentathlon as a Force Multiplier*

- f. Interaction of the three dimensions of PTSR (Physical Training, Sport and Recreation) directly contributes to the combat readiness requirement profile of the Inf Soldier 2020. The Physical, Psychological, Emotional, Cultural, Social, Occupational and Intellectual fields support these dimensions. It needs to be pointed out that the Force Preparation environment in the model was in detail described in Fig 29. Integration of PTSR and the advantages gained from it are clearly illustrated in the diagram below (44: A1 - A2), see Fig 30:

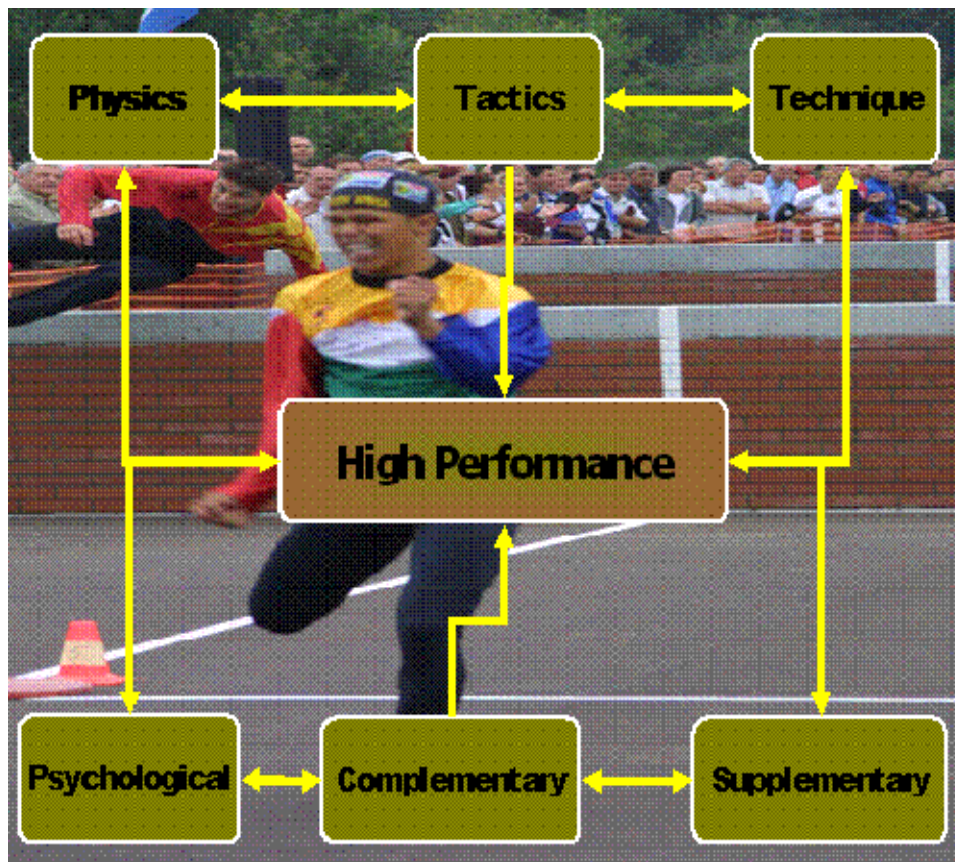


**Fig 30: The integration of PTSR**

- g. As illustrated in Fig 29 and 30, the integration of Sport Physical Training and Recreation will play a major role in the preparation of the SA Army Inf soldier of 2020. Military Pentathlon is a integral part of this illustration and furthermore supported by the SANDF Military Council's decision of 3 May 2003 that Military Pentathlon will be an integral part of training as was the case of Naval Pentathlon, Swimming, Parachuting, the different Shooting disciplines and Combat walking (78: 1 - 2). These codes are regarded as institutional to Military and are regarded as closely related to military activities.
70. After evaluating all these policies the following were deducted:
- a. That policy does not address the entry-level requirements, ie competency levels required before specific skills training can commence.
  - b. No skill is practiced in conjunction with fitness objectives.
  - c. No policy except the PT policy addresses the use of Military Pentathlon as a Force Multiplier.

## **CONCLUSION**

71. It is thus important to note that without any uncertainty Military Pentathlon could be used in its entirety to measure the competency level of the SA Army Inf Soldier 2020. This is also true about the other Combat Corps in the SANDF. Since the earliest times of training it was realised that people train much easier when they do repetition, enjoy what they do and compete on the basis of competition against each other. It is thus concluded that high performance of the soldiers in operations, certainly, is a result of the integration of the several training methods, embracing the six types of the soldiers preparation, which are: physics, tactics, technique, psychological, complementary and supplementary (the last two related to the nutritional part), and of the relevant scientific progresses involving the physiologic effects of the specific exercise such as Military Pentathlon (25: 39), see Fig 31.



*Fig 31: Elements of High Performance*

72. The relationship between Inf training and the use of Military Pentathlon as a training aid could be related to the illustration as indicated in Fig 32. The three circles at the bottom of the illustration are of great importance because it relates to the benefits Military Pentathlon has as a Force Multiplier for the Inf Soldier of 2020.



**Fig 32: Relationship between Military Pentathlon and the Inf Soldier 2020 Training**

73. The SA Army Inf Soldier is summarised by the author in the words of US Army Chief of Staff General Peter Schoomaker's excellent Soldiers Creed which is adapted by the author for the SA Army Inf Soldier of 2020 (70: 3);

I am a Warrior and a member of a team.

I serve the people of the Republic of South Africa and live the SA Army Values. I will always place the mission first.

I will never accept defeat.

I will never quit.

I will never leave a fallen comrade.

I am disciplined, physically and mentally tough, trained and proficient in my warrior tasks and drills.

I always maintain my arms, my equipment and myself.

I am an expert and I am a professional.

I stand ready to deploy, engage, and destroy the enemies of the Republic of South Africa in close combat.

I am a guardian of freedom and the African way of life.

**I am a South African Army Infantry Soldier.**

74. It is clear from the above creed of the South African Army Infantry Soldier that the underling values obtained from using Military Pentathlon as a Force Multiplier can undoubtedly enhance and maintain these values.

75. The SANDF and in particular the SA Army Inf Fmn has the opportunity to make sure that they become leaders in the world and indeed in the African context on the subject of Military Pentathlon being used as a Force Multiplier to prepare its soldiers. It

however needs to be pointed out that the use of Military Pentathlon as a Force Multiplier to other Combat Forces and Combat Support Forces in the SANDF can also be to their advantage. The SA Armour Fmn (specific reference to the units in Bloemfontein) already has demonstrated the usefulness of Military Pentathlon as method to improve military discipline, skills and fitness in general.

76. The use of Military Pentathlon as a Force Multiplier will ensure that the SANDF will enhance the general self-discipline, basic skills levels and train combat specific which is needed to execute their tasks for the ever-prominent role that the SANDF soldier will play in especially the African battle space.

SIGNED AND ON FILE

**(J.P.S. LE ROUX)**

**COACH SOUTH AFRICAN NATIONAL DEFENCE FORCE MILITARY PENTATHLON  
TEAM: LT COL**

OCT 05



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