



CHAPTER 4

APPLICATION OF MARITIME POWER IN THE SOUTH AFRICAN CONTEXT

CONTENTS

Introduction	41
Requirements Emanating from the SANDF Military Strategy	42
Military Strategic Objectives	43
Military Strategic Concepts	45
Military Strategic Capabilities	46
Mission of the SA Navy	48
SA Navy Strategy	49
Circumstances in which SANDF Forces may be Employed	50
Defence of the RSA	51
Protecting the Security of the Prince Edward Islands	52
Treaty Obligations	52
Promoting and Defending the RSA's Interests Worldwide	52
Employment of Naval Forces	52
Surface Combatants	52
Submarines	54
Combat Support Vessels	56
Mine Warfare Forces	56
Inshore Patrol Vessels	57
Operational Diving Teams	57

Maritime Reaction Squadron	57
Hydrographic Service	58
Maritime Patrol Aircraft	58
Naval Co-ordination and Guidance of Shipping	58
Deployment of Forces	59
Principles of War	59
Application of Capabilities	65
Conclusion	69



CHAPTER 4

APPLICATION OF MARITIME POWER IN THE SOUTH AFRICAN CONTEXT

INTRODUCTION

The previous two chapters describe the *raison d'être* of the SA Navy, derived from higher order strategies and documents, and the traditional roles in which naval forces are deployed. This chapter will describe how the SA Navy's assets are employed, considering the above factors.

The primary objective of the SA National Defence Force is to protect the Republic, its territorial integrity and its people. In so doing, it portrays the image of the "People's Navy". As no conventional military maritime threat against the RSA currently exists, most of the tasks that the SA Navy conducts are within the Diplomatic and Policing Roles. However, it must maintain its conventional capabilities due to the volatility and uncertainty in the changing world.

The traditional roles of a navy, as described in Chapter 3, can be directly linked to the approved three military strategic objectives of the SANDF, namely to

- a. enhance and maintain comprehensive defence capabilities (Military Role);
- b. promote peace, security and stability in the region and on the continent (Diplomatic and Policing Roles); and
- c. support to the people of South Africa (Diplomatic and Policing Roles).

Although many of the roles are not of a military nature, the ships and submarines still require to be prepared for tasks within the Military Role and to combat unconventional threats as part of the inherent collateral value of navies. The unconventional threats that do exist are asymmetric in nature and tend towards acts of criminality and maritime terrorism, for example piracy, smuggling and the poaching of resources.

The SA Navy is a versatile medium regional, force projection navy with a limited blue water capability. The blue water capability is provided by the Frigates and submarines, and is limited, because of the lack of resources to sustain operations and the lack of a sufficient number of platforms to operate simultaneously and independently, in different geographical areas for extended periods. The surveillance capability of the SA Navy is supported by the maritime patrol aircraft of the SA Air Force. Although they have a limited capability they are important in providing a maritime surveillance capability to the SANDF.

The different types of force structure elements (FSEs) in the SA Navy's inventory, as described later in this chapter, underscore its versatility.

REQUIREMENTS EMANATING FROM THE SANDF MILITARY STRATEGY

The mandate of the SA Navy is drawn from the 1998 Defence Review, as amended in 2006, and the Defence Act 2002, Act No 42 of 2002, Article 12(1). This mandate requires the provision of naval forces, as the elements of the SANDF's maritime capabilities, to

- a. counter attack from seaward and on shipping;
- b. provide for interdiction within the maritime battlespace once hostilities have begun;
- c. provide for counter-offensive actions to drive the enemy from own or friendly sea-space;
- d. ensure that naval units have the inherent ability to function at the required joint levels, within the SANDF command and control system;
- e. continuously prepare such naval forces for the defence of the RSA;
- f. prepare specified naval units to participate in operations other than war; and
- g. maintain effective support capabilities to support all naval forces.

Following from the mandate, and always subject to the Constitution of the RSA and the laws governing the defence of South Africa, the **vision** of the SA Navy is ***to be unchallenged at sea***. This implies the following:

- a. **Regional Reach.** The SA Navy provides sustained forces capable of operating throughout the Southern Oceans and Southern African littoral.
- b. **Balance of Force Capabilities.** The size and shape of the SA Navy result in a coherent military

The Frigates provide the SA Navy with regional reach and many of the capabilities that a Fleet requires to be a balanced force



capability across all relevant areas of maritime warfare, together with the ability to operate these balanced forces effectively, giving it a battle winning combat capability.

- c. **Interoperability.** The SA Navy is prepared for operations, jointly or in combination, with whatever other forces may be required, whether these be SA Armed Forces, the Armed Forces of the UN / AU / SADC / other nations or civilian authorities.
- d. **Information Superiority.** The SA Navy is capable of using information to achieve mission success by increased situational awareness, interoperability and increased speed of information flow, whilst protecting and preserving own information assets.
- e. **Quality.** The SA Navy provides capable forces that are completely fit for purpose as and when required.
- f. **Will.** The individuals, units and the command chain of the SA Navy are willing to become completely engaged in whatever task, from low intensity peacetime activities to high intensity war fighting, with utter determination to succeed.

MILITARY STRATEGIC OBJECTIVES

The military strategy is derived from the Constitution of the RSA, the Defence Act, the White Paper on Defence, the Defence Review and the National Security Strategy of the RSA. The need to actively promote peace and security in the region is a key tenet of the National Security Strategy, which directs the defence strategy.

The military strategic objectives are the **ends** to be achieved by the SANDF. Each objective has a desired end state to be achieved. Once the end state is reached the objective has been satisfied. The objectives are not prioritised and cover the full range of military and other ordered commitments. The objectives are as follows:

- a. **To Enhance and Maintain Comprehensive Defence Capabilities.**

The provision of self-defence in accordance with the international law against any external threat of aggression, which endangers the stability of the RSA. The desired end state is a free South Africa that is not threatened by an external force, be it a nation, or a non-nation.



Exercises are held to ensure the combat capability of the weapons in order for the SA Navy to maintain its comprehensive defence capability

- b. **To Promote Peace, Security and Stability in the Region and the Continent.** The provision of external deployment or support to enhance security in support of decisions by the executive. The desired end state is a stable and prosperous African continent. The tasks to achieve the objective involve participating in and contributing to AU and Peace and Security structures, assist and participate in post-conflict reconstruction activities in strife-torn and disaster hit countries in Africa.



- c. **To Support the People of South Africa.** Supporting the population of the RSA in operations and activities other than war, when the responsible state departments do not have adequate capacity to do so. The desired end state is a South Africa with a developed infrastructure and educated citizens. The tasks involved to satisfy the objective are to support the Government activities and initiatives, eg national (Youth Day, Women's Day, etc) and major events (elections); participating in disaster management and assisting communities in social development initiatives.

The SANDF missions identified to achieve the objectives for the next ten years are set out below. They are subject to constant review.

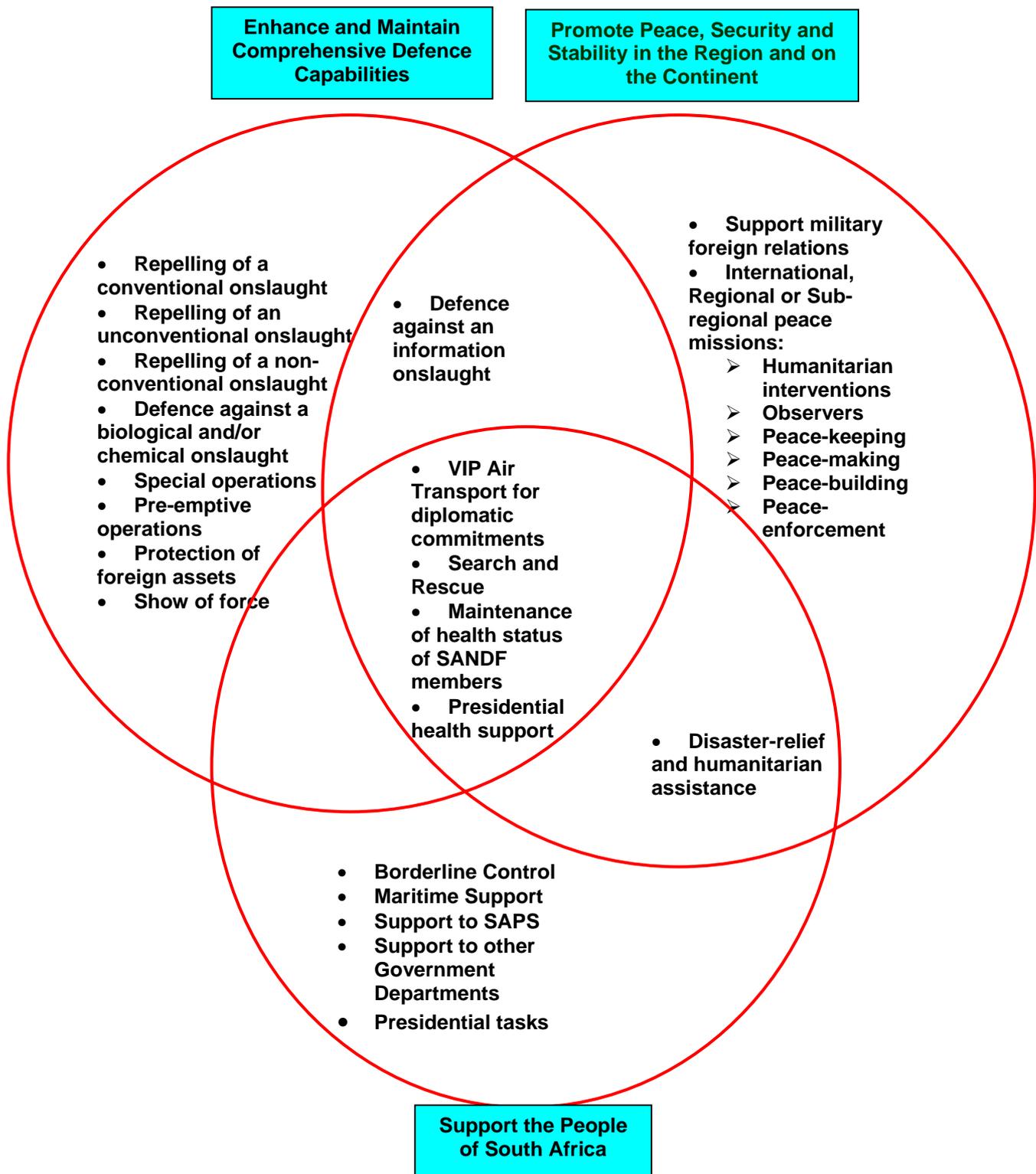


Figure 4: Military Strategic Objectives

MILITARY STRATEGIC CONCEPTS

The military strategic concepts describe the ways to be followed to meet the military strategic objectives. The SANDF will use a mission-based approach to achieve the military strategic objectives of the DOD. This approach uses wartime and peacetime missions to direct the peacetime strategy for force preparation and to guide joint and combined force preparation and force employment for incidences of conflict. The concepts are as follows:

- a. **Mission-Essential Training**. The SANDF is to educate, train and develop its personnel in the essential knowledge and skills required to execute the tasks necessary to accomplish its missions.



- b. **Mission-Trained Force**. A force prepared and supported to execute identified missions (within the parameters of the selective engagement concept).
- c. **Selective Engagement**. The concept of selective engagement indicates that the SANDF will execute all the prescribed missions, but will be selective in terms of the extent to which operations and tasks, emanating from these missions, will be executed. This concept implies that calculated risks will have to be taken. The C SANDF will advise the National Executive (the President and Cabinet) on the selection of the objective, who ultimately decides on the extent of the operations.
- d. **Strategic Positioning**. The SANDF will proactively establish a sound security environment, supported by influencing political and military foreign-relations actions, and the pre-placement of appropriate military capabilities.

MILITARY STRATEGIC CAPABILITIES

The capabilities of the SANDF constitute the means of the military strategy. The capabilities consist of the following strategic capabilities:

- a. **C⁴I³SR (Command and Control, Communications, Computers, Information, Intelligence, Infrastructure, Surveillance and Reconnaissance) Capability.**
In the maritime context, it means that good Command and Control channels are necessary for the forces to operate effectively. In order for the personnel to receive mission-essential training to constitute a mission-trained force, good information and intelligence is to be provided to the force prior and during an operation.
- b. **Light Mobile Capability.** The inherent capability of ships is to be flexible and mobile in their deployment, as described in the previous chapter, satisfies this military strategic concept.
- c. **Conventional Warfare Capability.** The SA Naval forces will maintain their conventional surface, submarine and mine warfare capabilities, plus receive combat support during deployments. Those capabilities will be used for collateral tasks that arise from Operations other than War.
- d. **Support Capability.** The SA Navy's technical and logistic support capability ensures that its ships remain supported in preparation for and during operations.

The relationship between the military strategic objectives (ends), the missions that flow from the objectives and the concepts (ways) the SANDF uses to deploy its capabilities (means), are depicted in the following diagram.

MILITARY STRATEGY IN CONTEXT

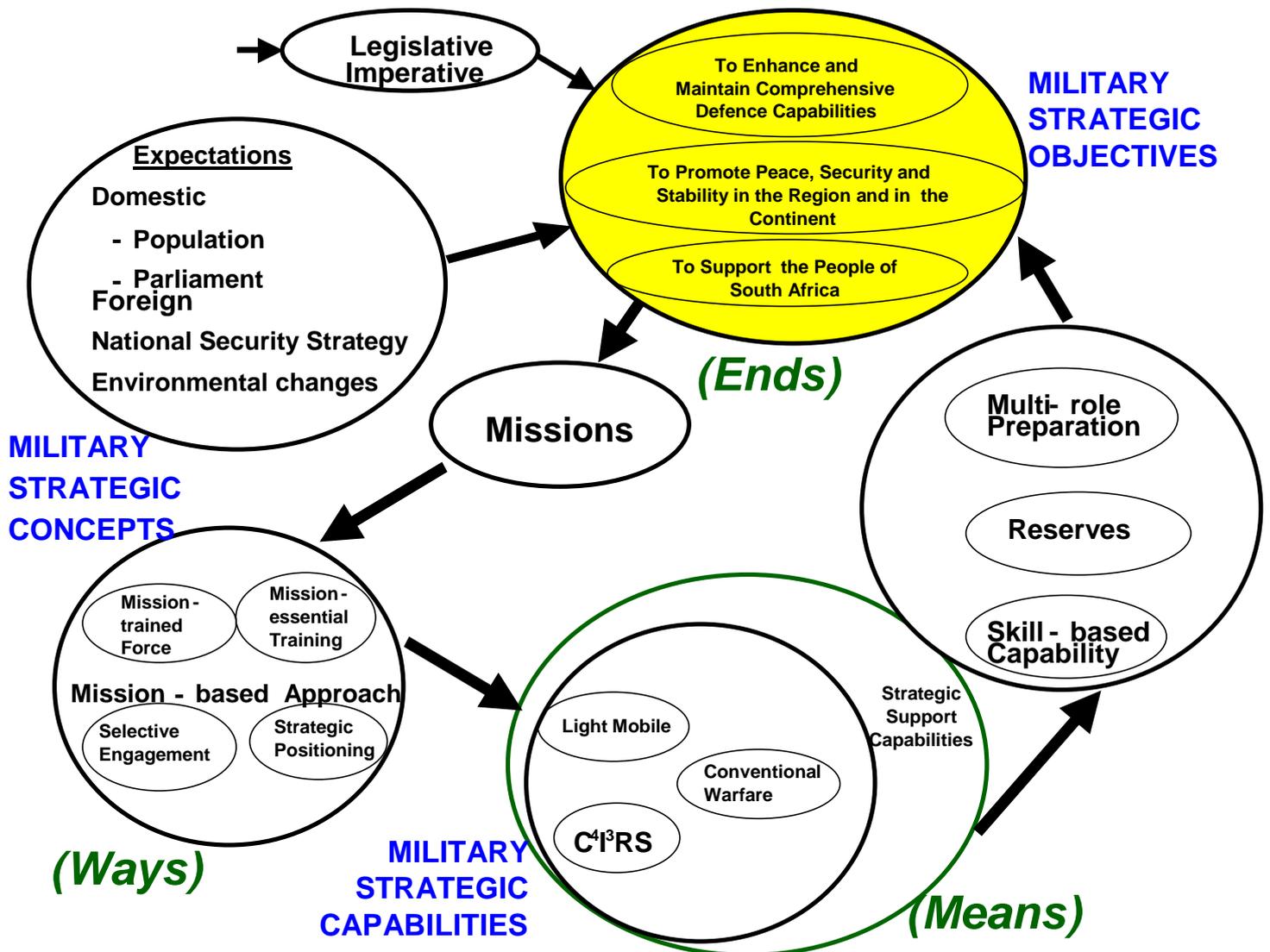


Figure 5: Military Strategy in Context

MISSION OF THE SA NAVY

The Mission of the SA Navy is to provide combat ready and supported maritime defence capabilities for the defence and protection of the RSA. The Chief of the SA Navy is responsible to provide these forces to the Chief of Joint Operations who will employ them on behalf of the Chief of the SA National Defence Force. In order to achieve this Mission, the SA Navy shall focus its efforts on **winning at sea**. This entails the following:

- The SA Navy **wins at sea** through the provision of combat ready and supported maritime defence capabilities for the defence and protection of the RSA. Operationalising the mission entails providing strategic direction for maritime defence, establishing and maintaining a force structure, training personnel, maintaining weapons systems and preparing forces.
- The SA Navy **wins at sea** when its forces enable CJ Ops to succeed in fulfilling its maritime-related strategic objectives of providing support to the people of the

RSA, promoting peace, security and stability in the region and continent, and enhancing / maintaining comprehensive defence capabilities.

- c. **Winning at sea** further implies that the SA Navy is capable of successfully achieving its vision through the establishment and support of technologically advanced and sustained maritime combat platforms and equipment, manned by highly competent and qualified personnel.
- d. The SA Navy can also **win at sea** by being a credible deterrent force. Credibility is achieved by having motivated and well-trained personnel operating and using their equipment in the most efficient and professional manner. Once the opponent is deterred from engaging the SA Naval forces, the battle at sea is also won.

SA NAVY STRATEGY

The provision of maritime defence for the RSA is achieved through the development, management and maintenance of maritime capabilities that enable CJ Ops to implement the force employment strategy. The force employment strategy will be executed with a joint or multinational mission-trained task force comprising capabilities of all the Services and Divisions, either supported by or in support of, other role players.

The force employment strategy also indicates the strategic objectives for the short to medium term, and focuses on providing *support to the people of the RSA, promoting peace, security and stability in the region and the continent, and enhancing / maintaining comprehensive defence capabilities*. This implies that the SA Navy must ensure the following:

- a. Maintenance of a demonstrated, deterrent defence capability given the inherent unpredictability of the future and the time taken to build up a defence capability. The following naval missions, derived from the SANDF missions, are envisaged for the next ten years:
 - i. Operations against enemy forces.
 - ii. Protection of maritime trade (including naval co-ordination and guidance of shipping).
 - iii. Combat operations against opposing land forces.
 - iv. Combat operations in support of and the defence of own land forces.
 - v. Combat and non-combat evacuation operations.
 - vi. Combat search and rescue.
- b. Promotion of peace, security and stability in the region and continent by engaging in co-operative ventures with its counterparts throughout the region in such fields as maritime defence planning, combined exercises, procurement of arms and equipment, training and education and the conduct of exchange visits. The following naval missions, derived from the SANDF missions, are

envisaged for the next ten years. These missions would be conducted outside the territorial waters of the RSA.

- i. Embargo, sanctions, blockade and quarantine enforcement.
 - ii. Peace Support Operations, which includes Peacekeeping, Peace Enforcement and Peace Building Operations.
 - iii. Anti-piracy and anti-sea robbery operations.
 - iv. Fishery protection.
 - v. Drug interdiction.
 - vi. Anti-contraband operations.
 - vii. Riverine and inland lake patrols.
 - viii. Maritime counter terrorism.
 - ix. Support to counter insurgency operations.
 - x. Enforcement of maritime agreements.
- c. Provision of support to the people of the RSA by playing an active role within the internal maritime sector in order to ensure optimum utilisation of all State maritime resources. Most of the missions will be undertaken in support to other government departments where they are the leading department. The following naval missions, derived from the SANDF missions, are envisaged for the next ten years:
- i. Humanitarian aid and disaster relief.
 - ii. Border safeguarding.
 - iii. Search and rescue.
 - iv. Hydrographic surveying.
 - v. Support to other Government Departments.

CIRCUMSTANCES IN WHICH MARITIME FORCES MAY BE EMPLOYED

The SANDF Defence Doctrine indicates the circumstances in which SANDF forces may be employed. These circumstances are indicated below and will be used as background for further discussion on the maritime missions that the SA Navy must be capable of executing.

Protecting the security of the RSA includes the capacity to deter and spans the range from national operations such as supporting the civil authorities up to and including limited war. Supporting the civil authorities could involve a range of defence capabilities depending on

the nature of the operation. These might range from providing limited staff to support any government department for the socio-economic upliftment of the community, or assisting local authorities during natural disasters, to the use of significant resources such as those that may be required to assist the civil power in countering terrorism. Involvement in UN Peacekeeping Operations is also possible. A limited war, which could be fought alongside SADC, AU or UN-sanctioned forces, would require the full range of war fighting capabilities and larger forces than might be needed in other circumstances. Although limited war is judged to be an unlikely contingency in present circumstances, the Government's ultimate responsibility for national survival means that its armed forces must be capable of deterring or, after due warning and mobilisation, of fighting a limited war. In summary, as provided for in the Constitution of the RSA, the SANDF (and therefore the SA Navy) may be employed in the following functions for service in

- a. defence of the RSA, for protection of its sovereignty and territorial integrity;
- b. compliance with the international obligations of the RSA with regard to international bodies and other states;
- c. the preservation of life, health and property;
- d. the provision or maintenance of essential services;
- e. the upholding of law and order in the RSA in co-operation with the SA Police Service under circumstances set out in law where the Police Service is unable to maintain law and order on its own; and
- f. support of any department of state for the purpose of social upliftment.

It is the policy of the State that the primary function of the SANDF will be to defend the RSA against external aggression, with the other functions being secondary.

Defence of the RSA. The Maritime Doctrine underscores the Defence Policy to ensure a secure South Africa. Defence Policy sets the objectives of the Military Strategy, shapes the structure and capabilities of the armed forces and guides the contribution they make to the security of the country, in terms of the protection and promotion of national interests. This is done as follows:

- a. **Protection.** An effective maritime capability is necessary to deter or defend the country against an aggressor who threatens the territory or interests of the RSA. The country must retain the capability for independent action to meet the national obligations at home and abroad. As many of the RSA's national interests are shared with other countries from Southern Africa and further a field, national security can best be guaranteed through defence in co-operation with allies or coalition partners. This may be achieved through, among other organs, the Standing Maritime Committee (SMC) of the Inter-State Defence and Security Committee (ISDSC). SA Navy resources can be used in conjunction with the resources of the neighbouring countries. This includes the exchange of personnel between the vessels.

- b. **Promotion of National Interests.** A credible maritime capability is important for the promotion of the wider interests, to confer influence and to underpin diplomacy.

Protecting the Security of the Prince Edward Islands. As part of its function of protecting the sovereignty of the RSA and its territorial integrity, the SA Navy will be required to protect the territorial integrity of the Prince Edward Island group and its surrounding Exclusive Economic Zone (EEZ). For the foreseeable future, any such operation would probably be limited to preventing exploitation of the natural resources in the EEZ and future extended continental shelf.

Treaty Obligations. Membership of the SADC, the AU and the UN place obligations on the RSA Government to deploy forces to help assist members states in ensuring stability in their respective countries and the region. This will happen even if the security of the RSA is not directly threatened.

Promoting and Defending the RSA's Interests Worldwide. SA Navy forces may be used to promote the RSA's interests in a wide variety of ways, including support to diplomacy, military assistance and humanitarian and peace missions. Circumstances may require the defence of the RSA's interests. Depending on the nature of the interest involved and the seriousness of the threat, the Government is likely to have a greater prerogative regarding the nature and size of the forces it commits to such an operation than it would if the RSA's territorial integrity were under attack. In view of the RSA's interests and dependence on regional trade with SADC countries, it is likely that any serious threats to the security of SADC member states would also represent a threat to the RSA's interests. In these circumstances, SA Navy forces may take part in operations authorised by the UN and/or the AU/SADC to defend or restore peace and security in the SADC region. This is likely to be within the context of an alliance or coalition.

EMPLOYMENT OF SA NAVY FORCES

Having reviewed the circumstances and missions under which the SA Navy forces are to be employed, the following section will discuss the range and capabilities of selected FSEs.

SURFACE COMBATANTS

The Frigates provide the surface combat capability of the SA Navy. They are therefore, the prime means of protecting own and allied shipping and the movement of sea-borne trade in our sea lines of communication (SLOCs) from hostile forces. It is an intermediate size vessel with good sea-keeping characteristics that enables sustained operational presence of the SA Navy in the littoral waters.

The Frigate is a multi-purpose vessel capable of operating individually, or jointly as a member of a task force with other surface combatants to counter air, surface and sub-surface threats/forces. Its combat roles include

- a. interdiction against hostile air, surface and sub-surface threats in the deep battle space areas;
- b. support of land forces in the deep battle space areas;

- c. provision of a joint operations command, control, communications, intelligence and information (C³I²) warfare platform;
- d. escort duties and area protection of own SLOCs in the close and rear battlespace areas;

Due to its size and sea-keeping ability, a Frigate is capable of operating specialised maritime helicopters in marginal sea conditions, as are experienced within the South African Exclusive Economic Zone (EEZ). These helicopters form an integral part of the Frigates' combat ability - they are capable of deploying forward sensors and weapons ahead of the task group in order to sanitise the future battlespace.



Other than combat missions, the multi-dimensional nature of a Frigate enables it to cover a wide range of collateral tasks in support of the RSA Government and national strategies. These tasks include the following:

- a. Peace Support Operations (PSOs) in Africa.
- b. Evacuation of civilian nationals from littoral states in times of crisis.
- c. Patrolling for
 - i. the protection of marine resources against poaching and pollution; and
 - ii. law enforcement (the prevention of piracy, smuggling of illegal weapons, substances and contraband) of own and fellow Southern African Development Community (SADC) states territorial waters and EEZs from foreign exploitation.

- d. Search and Rescue (SAR) missions within our international SAR area of responsibility (which extends as far south as the Prince Edward Group of Islands).

The Constitution of the RSA, the White Paper on Defence and the Defence Review are explicit in specifying the primarily defensive posture of the SANDF. A Frigate provides a multi-dimensional platform capable of executing either peacetime roles, or responding to the hostilities of a belligerent. The presence of a surface combatant of the calibre of a Frigate, is a manifestation of the determination of the RSA Government to

- a. defend its territorial integrity and its people; and
- b. fulfil its role as a stabilising force in the African sub-continent.



The use of a maritime combat helicopter (MCH) greatly enhances the capability of a fighting force. The MCH extends the visual horizon of the surface vessel, as well as increasing the effective range of the ship's sensors and weapons. Furthermore, MCHs may be equipped with a range of weapons including air-to-air missiles, air-to-surface missiles and lightweight torpedoes (LWTs). They are, in addition, effective anti-submarine warfare platforms when equipped with a dipping sonar and/or sonar buoys, LWTs and depth charges.

SUBMARINES

Conventional submarines play a major role in littoral maritime warfare. They are mobile, versatile and resilient. They can contribute reach to any campaign or operation. They are also suitable for reconnaissance and surveillance tasks.

Due to the nature of the environment, the sea is largely opaque to a variety of sensors. It can, therefore, be used as a hiding place for submarines. Deep water enhances a submarine's capability of three-dimensional mobility, thus promoting its ability to remain undetected in both attack and evasion. The discretion of a submarine in the confines of littoral waters is enhanced by poor sonar conditions and the proximity and profile of the seabed to avoid detection.



The SA Navy has an excellent submarine capability in its Type 209's. As it is the only sub-Saharan country operating submarines in Africa, they can be used as a covert means of conducting maritime surveillance

In areas where an overt above-water presence of naval forces and surveillance aircraft is neither advisable nor possible, submarines are well suited to carry out a wide range of surveillance, reconnaissance, situation analysis and verification missions. Because they operate “unseen”, a submarine’s immediate use in an area can be covert and non-threatening, and will not impact upon the diplomatic tensions of the area.

In a conflict situation, the mission spectrum of a submarine may include the

- a. protection of the maritime territorial integrity of the RSA;
- b. protection of the national and allied SLOCs; and
- c. disruption of a belligerent’s SLOCs.

This will require a submarine to carry out operations for the protection of our own (and possibly allied) merchant vessels and coastlines in our rear areas, and the interdiction of hostile surface units, submarines and merchant vessels in the close and deep battlespace areas. A submarine’s ability to poise makes it a powerful tool in maritime operations, and its capacity for leverage, particularly wrt expeditionary and sea denial operations is of greater importance than ever in today’s world of risks, volatilities and uncertainties.

As a result of their unique and characteristic features, only submarines are able to maintain a deterrence over a long time in an area dominated by superior opponent forces. Their presence is a manifestation of the determination of the Government to defend the territorial integrity and the people of the RSA, and if so called upon, to react against the hostilities of an opponent. Submarines are a force in being, a force never to be discounted. And as they lurk

undetected, they deter. Used *wisely*, they are the RSA's ultimate strategic defence mechanism and can be used for early warning.

COMBAT SUPPORT VESSELS

The combat support vessels provide logistic support to the fleet. They are able to provide the capability for underway replenishment of fuel, water, stores and ammunition, and bulk fuel transport. Such a capability allows the SA Navy to conduct blue water and/or foreign deployments, as well as limited sustained operations within a single theatre of operations.

Besides providing support to the SA Navy's ships and submarines during conflict, the Combat Support Vessels are also invaluable in a wide range of military operations other than war. In this regard they can be used for the following:

- a. The transportation of limited land forces and their equipment to any area from where the SANDF might be required to deploy for a mission where a sealift capability is required.
- b. The provisioning of both temporary accommodation for refugees as well as limited hospital/medical facilities.
- c. The transportation of material and equipment to areas where social disturbances or natural disasters have caused humanitarian distress.
- d. General tasks in support of other state departments.
- e. The provisioning of a platform for helicopter operations.

MINE WARFARE FORCES

The Mine Warfare Forces provide a capability that enables port approaches and harbour channels to be kept clear of any threat from mines or unidentified submerged objects. They are used in the first step to ensure free access to the sea and the RSA's SLOCs. Considering the importance of maritime trade to the prosperity of the RSA, access through the country's ports is to be ensured at all times. They also provide the clearance to the approaches to beaches for landing operations.

The SA Navy is moving away from having dedicated MCM vessels for Mine Warfare operations, to acquiring a core capability, which can be expanded when the threat arises. The capability will consist of unmanned or remote controlled vehicles for mine detection and neutralisation. This capability will be operated from vessels of opportunity, therefore, dedicated MCM vessels are not required.

INSHORE PATROL VESSELS

Inshore Patrol Vessels are lightly armed vessels with a limited deployment capability. They provide the patrol capability of the SA Navy and are mostly involved in the policing role whereby they patrol the RSA's inshore coastal waters and port approaches.



These vessels form the inner layer of defence against smaller vessels and they also ensure sufficient inshore presence, in support of operations, such as the enforcement of state authority and the upholding and restoration of law and order. They can be deployed to other African countries to assist in patrolling their inshore waters.

OPERATIONAL DIVING TEAMS

Operational Diving Teams allow for operational diving tasks such as mine identification, mine avoidance, mine clearance, beachhead clearance, explosive ordnance disposal and they provide a SAR capability. These teams can be deployed to foreign countries to assist with their diving requirements.

MARITIME REACTION SQUADRON (MRS)

The Maritime Reaction Squadron will undertake the following tasks:

- a. Conduct inland water patrols, including lakes, waterways and riverine patrols.
- b. Conduct search and seizure operations during inland water patrols.

- c. Conduct boarding operations in national and international waters.
- d. Provide a deployable small craft, both inshore in the littoral and on inland waters in a defensive role.
- e. Protect SA Navy vessels in national and international harbours and anchorages.
- f. Protect SA Navy vessels in harbours and anchorages other than local naval harbours.
- g. Conduct ship-to-shore ('over-the-beach') operations and shore-to-shore ('over-the-beach' and/or secure harbour) operations.
- h. Transport limited numbers of personnel in the inshore littoral and the inland waters.
- i. Provide operational small craft support services to other state departments, for example to conduct non-combat evacuation operations (NEOs).
- j. Establish a Forward Deployed Base from which such operations may be conducted. In establishing this capability, all the integrated logistic support elements will be taken into consideration, for example communications infrastructure, technical and logistical support.

HYDROGRAPHIC SERVICE

The SAN fulfils its regional and international obligations to provide a hydrographic service to the maritime community, through its survey vessel and the ashore hydrographic infrastructure.

MARITIME PATROL AIRCRAFT

Maritime Patrol Aircraft (MPAs) provide an effective method of patrolling large areas and scouting for friendly/enemy forces in a given time. Although the current aircraft have limitations wrt their ability to provide a continuous and effective maritime patrol and deterrent capability, the information they provide is used for intelligence purposes.

The MPAs do not belong to the SA Navy, but are operated and controlled by the South African Air Force (SAAF). The information gained is, however, used by the SA Navy's forces patrolling the RSA's territorial waters.

NAVAL CO-ORDINATION AND GUIDANCE OF SHIPPING (NCAGS)

The NCAGS organisation is used in times of conflict to route merchant shipping through areas of least danger to avoid enemy combatants.

DEPLOYMENT OF FORCES

In its quest for international co-operation and international exposure of its personnel to foreign countries, the SA Navy will participate in the standing international commitments on a regular basis, as prescribed in Memoranda of Understanding (MoUs) and Agreements.

PRINCIPLES OF WAR

In planning for war and in executing that plan, commanders and their staffs at all levels need to take certain principles into consideration. The individual principles described below are not rigid laws, but provide guidance on which military action will be based.

Military personnel and writers, who derived them by analysing history and contemporary warfare, developed the Principles of War. The Principles of War constitute a collection of common-sense ideas, and they must be understood in their entirety, not as dogma to be rigidly applied.

Their applicability and relative importance changes with the circumstances: the application of judgement and common sense may lead to success, blatant disregard involves risk and could lead to failure. This in itself is a sound reason why commanders must remain flexible in their thinking. The South African National Defence Force, and, therefore, the SA Navy subscribes to the following Principles of War:

The Origin of the Principles of War

During the late 18th century there was an effort to place warfare on a scientific basis. The first effort to write a scientific document was seen as Vauban, who wrote a manual on field engineering. Lancelot de Turpin de Crisse, 18th century French count and military leader, was the first writer to suggest that there could be principles of warfare.

A. Gat. *The Origins of Military Thought, from the Enlightenment to Clausewitz*. Oxford: Clarendon. 1989. pp. 36-37.

The first to actually formulate principles of war was Henry Lloyd, a soldier of fortune, who wrote on achieving certainty in war by means of principles of war. His principles included; Concentration: Only an undivided army ... can hope to avoid defeat. Security: Keeping the lines of operation safe and short.

B.D. Watts, *Clausewitzian Friction and Future War*, 2nd Edition, Chapter 3.

Thereafter Clausewitz developed an extensive set of principles to teach the Kaiser's son. He later wrote in his book *On War* that principles of war should not be followed blindly. Others used Lloyd's thoughts to expand on this idea of principles, such as Dietrich A.H. von Bülow, Antoine-Henri Jomini, G.F.R. Henderson, Ferdinand Foch, Arthur Bryant and J.F.C. Fuller.

- a. Selection and Maintenance of the Aim. In the conduct of war as a whole, and in every operation within the war, it is essential to select and clearly define the aim. The ultimate goal in war is to achieve the national political aim, preferably without any fighting. Each phase of the war and each separate operation is directed towards this supreme aim, but will have a more limited aim which must be clearly defined, simply and directly. Once the aim is decided, all efforts are directed to its attainment until a changed situation calls for re-appreciation and probably a new aim. Every plan or action must be tested in terms of its bearing on the chosen aim.

Selection and Maintenance of the Aim

The D-Day landings on the beaches of Normandy in France and the subsequent operations aimed at overthrowing the German regime during World War II is a good example of the selection and maintenance of the aim.

This principle can be seen in the same context as the Effects Based Operations mentioned in a previous chapter. The aim of an operation is to create an effect. The effect that needs to be created during an operation must always be kept in mind.

- b. Manoeuvre. The object of manoeuvre is to dispose a force in such a manner as to place the enemy at a relative disadvantage and thus achieve results that would otherwise be more costly in men and material. This manoeuvring can be both the physical force or psychological, where the opponent, owing to manoeuvre, is placed in a position, which is to his disadvantage. The principles of manoeuvre and concentration are complementary to each other. Manoeuvre does not equal movement, as it rather refers to the positioning of own forces in an advantageous position with regards to the enemy. It is aimed at dislocation rather than destruction of the enemy.

Manoeuvre

The weather gauge is a very important factor to consider in naval warfare. When possible, the Commanders usually try and manoeuvre their forces to have the advantage of the weather behind them so that it will not affect their sensors and ship stability adversely.

During the Anglo-Boer War, Lord Roberts made a new plan after the defeat at Modderfontein. On 11 February 1900, Lord Roberts went by way of Jacobsdal, relieved Kimberley on 15 February 1900 and caught General Cronjé at Paardeberg on 17 February 1900. This was the first time the British did not use the route of a railway. The route to Jacobsdal, was seen by the Boers to be an offensive on Bloemfontein rather than Kimberley.

- c. Concentration. To achieve success in war, it is essential to concentrate force, which is morally and materially superior to that of the enemy at the decisive time and place. Concentration does not necessarily imply a massing of forces, but rather having them so disposed as to be able to unite and deliver the decisive blow when and where required, or to counter the enemy's threats. It therefore requires the achievement of superiority of combat power at the critical place and time to achieve the aim.

- d. Surprise. Surprise is the most effective and powerful influence in war and has a large effect on morale. Every endeavour is to be made to surprise the enemy and to guard against being surprised. By the use of surprise, results out of proportion to the efforts expended can be obtained and, in some operations when other factors are unfavourable, surprise may be essential to success. Surprise can be achieved strategically, operationally, tactically or by exploiting new material. The elements of surprise are secrecy, concealment, deception, originality, audacity and rapidity. Surprise can be achieved by using unexpected stratagems.

Surprise

The Israeli Defence Force obtained surprise during the Six Day War in 1967 by their air offensive. This was accomplished by attacking from the West rather than the expected East.

During the 1973 Yom Kippur War Egypt took the offensive by crossing the Suez Canal at a crossing where the Israeli Defence Force did not expect them to be able to cross. This was done using water hoses to breach the sand walls on the side of the Canal.

Gen Schwarzkopf surprised the Iraqi's in the 1991 Gulf War when he feigned an amphibious operation from the south east to oust the Iraqi's from Kuwait, but a land force went to the offensive from the west instead.

- e. Offensive Action. Offensive action aims to secure or exercise initiative, to maintain freedom of action, and to impose one's will on the enemy. Until the initiative is seized and the offensive action is taken, success is unlikely.

Offensive Action

"The [1991 Gulf] War began with a massive six-week air campaign. ... By February 23 [1991] the Coalition had positioned two corps on the Iraqi's extreme right flank. ... The Coalition ground invasion began on the morning of February 24, when lead elements of two U.S. Marine divisions entered the Iraqi defensive belt near the coastal highway [in Kuwait]. The main effort, however, was on the far left, where the Coalition VII and XVIII Corps soon followed with a massive single envelopment of the Iraqi forward defences. ... By the morning of February 27, the Iraqi blocking force had been effectively wiped out. ... Offensive skill, defensive error, and advanced technology" produced this effect.

S. Biddle, *Victory Misunderstood: What the Gulf War Tells Us about the Future of Conflict*, in R.M. Lloyd, et al (Eds), *Strategy and Force Planning*, Second Edition, Newport, Naval War College Press, 1997, pp. 481 – 492.

- f. Economy of Force. This requires the allocation of available combat power and resources in such a manner that all tasks together achieve the aim effectively.

Economy of Force

During the Yom Kippur War the Israeli Defence Force was able to make use of internal lines of communications. This enabled them to use the same force to fight one battle and then to fight on another front.

- g. Unity of Command. Unity of command implies that the decisive application of full combat power requires one responsible commander. This will ensure that co-operation between joint and multinational forces will become interdependent. The increased dependence of one of the Services upon another one and all of the Services upon the civilian war effort have made co-operation between them of vital importance in modern warfare. Unity of command will also ensure that the military can co-operate with non-governmental agencies, many of which will also be working within the area of operations, but not always with the same objectives as the military.

Unity of Command

The situation where unity of command was not used can be illustrated with reference to the battle of Cannae. At the battle of Cannae the Romans had a system that two commanders were in command of the soldiers. These commanders, Aemilius Paulus and Terentius Varro, alternated each day. Aemilius Paulus was a careful and cautious leader who did not want to provide Hannibal with the opportunity for battle, whereas Terentius Varro was in favour of attacking Hannibal's forces.

Hannibal waited till the morning that Terentius Varro would be the commander of the day to give battle. This caused the Roman armed forces to suffer a crushing defeat, with 60 000 dead.

R.E. Dupuy and T.N. Dupuy. *The Collins Encyclopedia of Military History, from 3500 B.C. to the Present*, 4th edition, Glasgow, Harper Collins. 1993, pp. 71 –72.

- h. Security. Security involves the defence of high value assets and information that are vital to the nation's armed forces. A sufficient degree of security is essential in order to obtain freedom of action to launch an offensive in pursuit of the aim. This could imply that risks are to be taken in order to surprise the enemy and gain a favourable situation.

Security

Good security was maintained with the planning and execution of the D-Day landings. The Germans were never sure what the Allies had planned, and if so, what beaches would be used.

- i. Intelligence. The continuous provision of in-time and real-time intelligence is a fundamental and indispensable requirement for the conducting of warfare.

Intelligence

On 28 January 1881, General Sir George Colley, who completely underestimated his opponent, lost the Battle of Laing's Nek. Some 2000 Boers fought against 1400 British regulars.

The Falkland Islands War of 1982 was preceded by warnings of an impending war since 1977. These warnings, however, were not heeded.

During the 1991 Gulf War, intelligence helped the six-week air campaign to counter most of the potential problems that ground force would have encountered. The main emphasis was on the Iraqi air defence system and the key elements of the command and control network.

However, during the 2003 Gulf War, intelligence was very poor and the USA/British armed forces went into Iraq to counter possible nuclear threats, which were ultimately found not to exist.

With modern intelligence systems and networks available, good intelligence should always be available to ensure that good decisions are made.

- j. Maintenance of Morale. High morale is a contributing factor to success in operations. Good morale fosters the will to win and to withstand provocation and adversity and is obtained through trust and good leadership at all levels of command.

Maintenance of Morale

During the Second World War there were virtually no Japanese prisoners of war on account of their very high level of morale. However, during the 1991 Gulf War, the morale of the Iraqi troops was not high. They had lost their will to fight and surrendered in large numbers.

- k. Flexibility. Flexibility includes the ability to group and regroup during the course of operations. It also calls for physical mobility of a high order, strategically, operationally, and tactically, in order that the forces can be concentrated rapidly and economically at decisive places and times.

Flexibility

No plan lasts longer than when the first shot is fired during battle. The commander is then expected to make decisions as the situation develops, which is usually unpredictable.

Helmuth von Moltke (Helmuth Carl Bernhard von Moltke 'the elder' 1800-1891)

- l. Simplicity. Simplicity of plans and commands will ensure success and negate the problems of the fog of war, stress and friction.

Simplicity

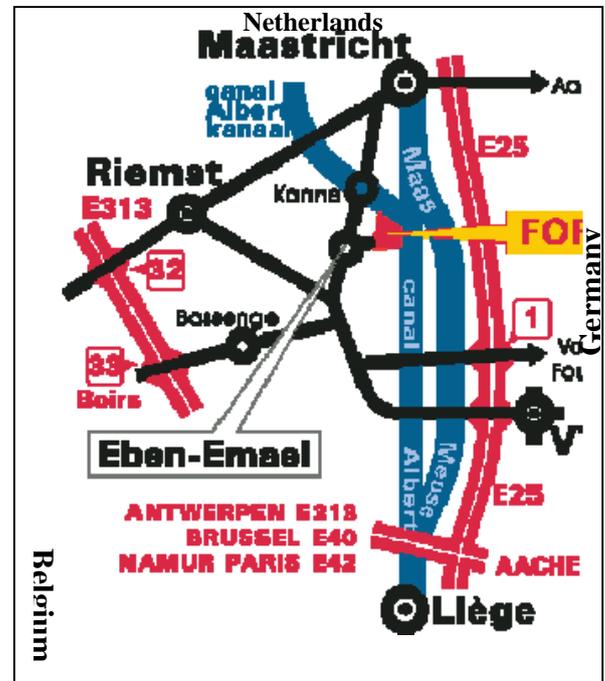
In May 1940, the seizure of the Belgian fortress of Eben Emael was critically important to the successful conduct of the French campaign by the German Wehrmacht in World War II. And yet, the preparation and conduct of this special operation were entrusted to a first lieutenant of the paratroopers, which at the time was a branch of the air force. At his disposal were just 77 paratroopers. At the very beginning of this operation the glider aircraft of the assault force leader, First Lieutenant Rudolf Witzig, was forced to make an emergency landing in a field near Cologne, which was approximately 100 kilometres from the objective. The remaining aircraft flew on and landed inside Eben Emael. The paratroopers completed their mission, but under the leadership of a staff sergeant.

During the landing approach to Eben Emael, another glider had to force-land approximately 60 kilometres from its objective. ... In the meantime, Witzig had located another aircraft to tow his glider. Taking off again for Eben Emael, he landed inside the fortress, immediately assumed command of his assault force, and brought about the surrender of the Belgian fortress.

The successful completion of this operation was an absolute prerequisite to ensure the Wehrmacht's rapid advance across the Meuse River and, thus, was essential to the rapid conclusion of the French campaign.

M.G. Widder, Auftragstaktik and Innere Führung: Trademarks of German Leadership, *Military Review*, September-October 2002.

The Belgian fort that was thought impregnable falls within 36 hours into German hands and seals the fate of Belgium and France. The simplicity of the plan was in entering the fort by means of the glider aircraft.



- m. Sustainability. The logistic and administrative arrangements are invariably crucial to success. They should be designed to give the commander maximum

Sustainability

The logistic support of the Falklands Campaign was a major success. Despite the long lines of communication, which stretched halfway round the world, the task force rarely lacked essential supplies, and equipment and spares were maintained at high levels of availability. The task force was equipped and dispatched in a remarkably short time, reflecting the high state of readiness and training of the three Services.

United Kingdom, *The Falklands Campaign: The Lessons*, London: Her Majesty's Stationery Office, 1983, p.27.

This enabled the British, with their long lines of communication to sustain the Fleet far away from home for an extended period.

freedom of action in carrying out the plan. The logistic and administrative organisation and arrangements should be kept as simple as possible, with the commander having a degree of control over logistics and administration within their sphere of command, corresponding to their responsibilities for the operational plan.

- n. **Reserves.** Reserves are established to prolong and renew action and to counter any unforeseen threats. A reserve must be established, and as soon as a reserve is committed, a new reserve must be established.

Maintaining of Reserves

Shaka always used reserves hidden from the enemy. These reserves were to look away from the battle in order to maintain their high morale. They were kept on a hillside overlooking the battle and were committed by the chief when required.

“Although it is commonplace to assign shared paternity for the theory of airpower to Marshal of the Royal Air Force, Viscount Hugh M. Trenchard, Brigadier General William (‘Billy’) Mitchell, and General Giulio Douhet – with honourable mentions to F.W. Lancaster and Major Alexander P. de Seversky (and H.G. Wells) – former Boer general, later British imperial statesman, Field Marshal Jan Christian Smuts has proved more influential than any of them. In a report dated 17 August 1917, Smuts expressed a particular vision of airpower that had ramifications which are still important for military strategy today.”

C.S. Gray. *Modern Strategy*, Oxford: Oxford University Press, 1999, p. 230.

In the report referred to, Field Marshal Smuts wrote the following: “The question of the provision of sufficient aircraft for defence purposes and for the formation of a reserve is one which, in our view, requires careful and immediate consideration. The enemy may possibly adopt the ruse of sending a small number of machines [aircraft] well in advance of his main attack in order to lure our squadrons into the air; the main enemy force may then appear on the scene and find himself unchecked, owing to the fact that our machines in coping with the advanced patrols had exhausted their petrol, and our pilots, their energy. ... Such a contingency we think must be contemplated and to meet it reserves should be kept in hand. We accordingly recommend that:

The air defence for the London area should be sufficient not only to cope with feints, but to meet the real attack or a possible second attack following close on a first attack.

The formation and retention of such a reserve is only in accordance with the general and elementary principles of warfare.”

H.A. Jones, *The War in the Air, Being the Story of the Part Played in the Great War by the Royal Air Force*, Volume V, Oxford: Clarendon Press, 1935, pp. 490 – 491.

APPLICATION OF CAPABILITIES

A number of missions require similar capabilities in the SA Navy’s inventory. For this reason, missions have been grouped together to form the general missions that the SA Navy must fulfil in order to achieve the three Military Strategic Objectives. The table below indicates which capabilities can be used to conduct tasks within the missions in order to achieve the Military Strategic Objectives.

The different capabilities (platform) that the SA Navy has, can be employed to carry out various tasks. Although some tasks can be carried out by a number of capabilities, some are more suited than others to carry out the tasks. The table below indicates the various capabilities, and their associated platforms, and their suitability to carry out the different naval tasks. The table also indicates which Military Strategic Objectives the tasks satisfy.

Table 1 : Table Indicating which capabilities are required to carry out tasks to achieve the Military Strategic Objectives

Ser No	MILITARY STRATEGIC OBJECTIVES	ENHANCE AND MAINTAIN COMPREHENSIVE DEFENCE CAPABILITIES										PROMOTE PEACE SECURITY AND STABILITY IN THE REGION AND ON THE CONTINENT									
		SUPPORT TO THE PEOPLE OF SOUTH AFRICA										Functions or Tasks									
		Platform	Surface Warfare	Submarine Warfare	Logistic Support	Support to Land Forces	Mine Detection and Clearance	Command & Control	Maritime Trade Protection/Escort	Protection of harbour infrastructure	Military Patrol	Riverine and Inland water Patrol	Search, Boarding & Seizure	Medical Assistance	Non-Combat Evacuation	Humanitarian Assistance	Search and Rescue	Disaster Relief	Anti-smuggling	Marine Resource Protection/Fishing Patrol	Hydrographic Service
			Capabilities																		
1	Surface Combat Capability	Frigate	●		●	●		●	●		●		●	●	●	●	●	●	●	●	
2	Submarine Capability	Submarine		●		●			●		●	●	●			●		●			
3	MCM Capability	MCM System				●			●		●				●				●		
4	Combat Support Capability	Combat Support Ship			●						●	●	●		●	●	●	●	●		
5	Force Defence Capability	MRS						●		●	●		●		●		●	●	●		
6	Patrol Capability	IPV/HPB							●									●	●		
7	Diving Capability	Divers				●									●	●					
8	Hydrographic Capability	Survey Vessel										●	●	●	●	●			●	●	
9	NCAGS Capability						●														

Legend : ● Green – ideal for task
● Orange – can do task, but not the ideal capability

Definitions:

1. **Surface Warfare.** Surface Warfare is the capability to engage targets in the air, on the surface and below the surface from a surface combatant. The following capabilities are associated with surface warfare.

- Surface-to-air missiles and guns.
- Surface-to-surface missiles and guns.
- Land attack capability.
- Submarine attack capability.
- Surface, air and sub-surface detection capability.
- Self-protection capability against missiles and torpedoes, using decoys.
- Early warning detection capability, including the use of the maritime helicopter.

2. **Submarine Warfare.** Submarine Warfare is the capability to engage targets in the air, on the sea surface and below the sea surface from a submarine. It encompasses the following capabilities:

- Surface and sub-surface attack capability.
- Self-protection capability against torpedoes, using decoys.
- Early warning detection.

3. **Logistic Support.** Logistic support is the replenishment of liquids and stores, the provisioning of medical facilities and the transportation of personnel in support of both the land and sea battle.

4. **Escort.** Escort is the routing of merchant shipping from danger areas and the provision of escorts for their protection.

5. **Interdiction.** The capability to interdict vessels at sea using the following capabilities:

- Surface and sub-surface attack.
- Air defence.
- Surface-to-surface missiles and guns.
- Surface, air and sub-surface detection capability.
- Self protection capability against missiles and torpedoes, using decoys.
- Early warning detection capability.

6. **Mine Detection and Clearance.** This includes the following capabilities:

- Detect, identify and clear mines.
- Route planning to pass through a sea minefield safely.
- Escorting vessels through a planned route.

7. **Patrol**. Patrol includes the capability for surveillance, reconnaissance and identification. Depending on the aim of the patrol, it could lead to the following actions

- boarding.
- search and seizure.
- Sea denial of non-combatants.

8. **Support to Land Forces**. This capability includes the provision of the following support:

- Logistic support for liquids and stores.
- Medical support.
- Command and control capability.
- Landing of land forces from either alongside or from the sea.
- Combat evacuation of land forces from beaches.
- Gunfire and land attack support to land forces.

9. **Riverine and Inland Water Patrol**. The capability to patrol lakes, rivers and estuaries. The capabilities associated with this capability are the following:

- Reconnaissance, surveillance and identification.
- Self-defence against small and medium calibre weapons.
- Limited passenger transport capability.

10. **Search and Seizure**. This capability requires a small boat transfer and boarding capability.

11. **Medical Assistance**. Capability to provide medical assistance to land forces, evacuees and ships at sea.

12. **Non-Combat Evacuation**. Non-Combat Evacuation is the capability to evacuate own forces or civilians from the land to the safety of a ship.

13. **Humanitarian Assistance**. Humanitarian assistance is the capability to provide the following support:

- Logistic and medical support to refugees and internally displaced personnel.
- Rebuilding of infrastructure.

14. **Search and Rescue**. The capability to search for and rescue personnel in distress at sea and on inland waters. The capability includes air surveillance.

15. **Disaster Relief**. Disaster relief is the capability to provide assistance during disasters that occur at sea and on land.

16. **Anti-smuggling and Anti-hijacking**. This includes the following capabilities at sea and on inland waters:

- Surveillance reconnaissance and identification.
- Boat transfer and boarding.
- Search and seizure.

17. **Marine Resource Protection**. Marine resource protection is the capability to conduct inshore patrols and to board and search vessels.

18. **Hydrographic Survey**. The capability includes the following:

- Conduct hydrographic surveys at sea and on inland waters.
- Process hydrographic data ashore.

CONCLUSION

The SA Navy will maintain its conventional capabilities in the surface, submarine, mine warfare and force protection domains, to be utilised in military tasks to protect the sovereignty and territorial integrity of the RSA. Collateral use will be made of the military capabilities to satisfy the Strategic Objectives of Regional Security and Support of the People to carry out the diplomatic and policing roles in support of other Government Departments and international organisations like the UN and AU.

In all cases, the principles of sea- control and -denial, poise, mobility, reach and pre-positioning will be used. In addition, the inherent capabilities of ships of flexibility, adaptability, reach, persistence and resilience will be used in the planning and execution of operations.

The readiness levels of the ships will be determined by the mission-based approach of the SANDF. Their readiness will be enhanced by means of the adherence to the readiness capability process that is described in the following chapter.