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**NEW ZEALAND DEFENCE FORCE**

**CAPABILITY REVIEWS**

**PHASE ONE – LAND FORCES AND SEALIFT**

**NOVEMBER 2000**

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## KEY FINDINGS

### SUMMARY

#### Land Forces

- To meet the full spectrum of potential requirements consistent with the Government's Defence Policy Framework the NZDF should have the ability to deploy and sustain a self-sufficient battalion group (up to 600). At present the NZDF cannot sustain a commitment of this size beyond 12 months without adverse consequences (see Chart on Page 11).
- Filling out the existing Army structure with 1,000 additional personnel would allow the NZDF to sustain a battalion group (900) deployment to a Chapter VI peace support operation indefinitely or provide a battalion group (1200) to a Chapter VII/mid-level combat operation for up to 12 months. It would not permit the Army to undertake concurrently another company size task.
- To undertake concurrently another company size task and to sustain a battalion group deployment to a Chapter VII/mid-level combat operation requires a three-battalion group capacity indefinitely. This could be provided by raising a third battalion group permanently or providing a third battalion group temporarily when required through a combination of increasing personnel levels on a short term basis, cross-employment of existing regular force personnel and enhancing the ability of Territorial Force personnel to serve on operational commitments. The three-battalion group allows for a Chapter VII battalion group deployed indefinitely, or a battalion group for up to 12 months and conduct a company task concurrently.
- Participation of Territorial Force personnel in long-term operations can be built up to around 10% of the force. This level of contribution could be improved by increasing the size of the Territorial Force, providing job protection for Territorial Force personnel, and providing more latitude for calling out Territorial Force personnel.
- The major and most urgent capital investments for land forces will be completed with the light armoured vehicles, tactical communications and light operational vehicles projects. There is only a marginal difference between the additional near term acquisition needs for peacekeeping and combat situations - \$70 million for peacekeeping and \$90 million for combat. The more significant cost impact derives from possible increases in personnel strength.

#### Sealift

- There are four options for providing sealift: 1) reliance on commercial chartering arrangements; 2) acquisition of a used military sealift ship; 3) purchase of a new purpose built ship like RSS ENDURANCE; and 4) modification of HMNZS CHARLES UPHAM. Acquiring a used military ship is costly and risky and is unlikely to offer any significant advantage.

- The modified CHARLES UPHAM has some shortfalls in off-loading cargo where ports are not available and limitations for other tasks. A ship like RSS ENDURANCE has a better over the beach capability and is more versatile, but it has only half the strategic lift capacity of CHARLES UPHAM. It costs significantly more – in the region of \$440 million as opposed to \$35-\$40 million to modify CHARLES UPHAM. It may, however, be a viable replacement for both CHARLES UPHAM and CANTERBURY. The cheapest option is to sell CHARLES UPHAM and rely on chartering. A modified CHARLES UPHAM is the most cost effective option for meeting the core requirement for assured strategic sealift.

## INTRODUCTION

In June of this year the Government released *The Government's Defence Policy Framework* (DPF). It outlined an approach that has been guided by and builds on the Foreign Affairs, Defence and Trade Committee Inquiry into Defence Beyond 2000. The DPF sets out the Government's broad strategic outcomes, its defence policy objectives and the roles and tasks envisaged for the New Zealand Defence Force (NZDF). To meet these objectives the NZDF must be able to offer an adequate range of capabilities which are sustainable, safe and effective in combat and in peacekeeping, and structured for maximum operational and political impact. The core requirement is for well-equipped, combat-trained land forces which are also able to act as effective peacekeepers, supported by the Navy and Air Force.

To ensure there is a sensible prioritisation of investments that will give the NZDF the depth it requires, the Government directed that the capabilities of the NZDF be reviewed to provide a basis for a new capability blueprint and a re-prioritised long-term capital equipment plan. The aim of these reviews is:

To provide advice to the Government on the range of military capabilities required to meet its defence policy objectives that are sustainable, safe and effective in combat and peacekeeping and structured for maximum operational and political impact.

This review has been undertaken by linking policy objectives set out in the DPF with capabilities using a scenario based strategic planning methodology. This method identified security events that could affect desired security outcomes and defence policy objectives. These events were then examined to identify what actions a New Zealand Government could potentially take and the capabilities required to successfully undertake such action. Some 50 different security events were identified.

The first phase of the reviews, which has now been completed, identifies the options for a land force structure and sealift capable of meeting New Zealand's most immediate needs. The review did not consider land force capabilities required for special operations. This is the subject of a separate study.

The interdependencies between land, naval and air forces will be analysed in Phase 2 in order to expose the implications, costs and effects of force structure changes.

## THE OPERATIONAL ENVIRONMENT

The analysis of the security events that could potentially face a New Zealand Government reaffirms previous observations about the changing nature of military operations in the post-Cold War era. For many countries war-fighting doctrine has shifted from set-piece battles between power blocs to crisis response by national forces or flexible multinational groupings put together to deal with a crisis.

At the same time peacekeeping has changed from monitoring ceasefires in accordance with Chapter VI of the UN charter to encompass a wide spectrum of tasks, including the use of military force in combat under Chapter VII of the UN Charter. For countries like New Zealand, the distinction between combat and peace enforcement has narrowed to the point where it has limited utility in determining the capabilities required by land forces.

The analysis of the security events demonstrated that no situation could be visualised in the foreseeable future which threatened New Zealand's survival. Except for some low level and limited situations, our involvement in dealing with security situations is a matter of choice rather than necessity. This means New Zealand governments have some discretion in deciding whether to get involved militarily and, if so, the type and size of the force they will provide.

This new operational environment confirms some basic principles applicable to land forces and sealift capabilities.

- To be effective as peacekeepers, land forces must be trained and equipped for warfighting. Land forces committed to peacekeeping operations must be able to defend themselves, protect others and have the means to enforce the mandate under which they are operating.
- To play a useful role in an operation, a New Zealand land force must be self sufficient at the tactical level, interoperable with others and able to operate as part of a joint and combined force.
- A rapid response to a crisis is crucial. New Zealand's contributions will be highly valued if it has land forces at a high state of readiness that can be deployed quickly with readily available airlift and sealift.
- Land forces must be trained and practised in working with the types of air and naval capabilities with which they will be expected to interact within a combined force. This means that they must participate in a regime of joint and combined training and exercises, using other NZDF capabilities as well as those of other countries. Such training cannot be arranged on an ad hoc basis prior to each operation, and it would be unsafe to commit forces to combined operations without adequate joint preparation.

## THE LAND FORCE REQUIREMENT

To meet the full spectrum of potential requirements consistent with the criteria set out in the DPF, the NZDF should have the ability to provide a deployable battalion group<sup>1</sup> that is self sufficient at the tactical level. This requirement can be met by a motorised, light infantry battalion group of up to 1,200 personnel consisting of the following elements:

- three rifle companies of 125 personnel each;
- a reconnaissance company of 100 personnel;
- a support company of up to 160 personnel to provide close direct and indirect fire support, including anti-armour protection, as well as communications;
- task-tailored support units to provide longer range indirect fire support within the battalion group's area of operation and engineer elements to deploy, manoeuvre and sustain the force, when such support is not available from another nation as part of a multinational force; and
- command, control and administrative elements (medical, supply, etc).

For a Chapter VI peace support operation, with a lower requirement for fire support, the size of the battalion group could be in the range of 600-900 personnel.

Many Chapter VI peace support operations have the potential to escalate to a Chapter VII/mid-level combat situation. The Army should therefore be trained and equipped to safely transition from one to the other.

The length of time the NZDF might be expected to sustain operational commitments cannot be forecasted with any certainty. Furthermore it is not always possible to ensure a pre-planned exit strategy. At present the Army cannot sustain a battalion size commitment beyond a period of 12 months without adverse consequences. To sustain a battalion group commitment beyond 12 months the Army requires a three-battalion group structure. This is based on assumptions that operational tours in theatre should not exceed six months and individual soldiers should have at least 12 months between operational tours.

It is likely that from time to time New Zealand will have to deal with more than one security situation simultaneously. The Army should therefore have sufficient depth to handle concurrent tasking. The analysis showed that a reasonable planning assumption is the ability to undertake a company size task concurrently with the deployment of a battalion group size force. This assumption caters for the requirement to continue with a multitude of smaller tasks (Bougainville, Solomon Islands, MFO, etc) and to have a stand-by force in New Zealand concurrently with a battalion size commitment. This element can combine with the other services to deal with security contingencies, civil emergencies and large scale search and rescue tasks in New Zealand.

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<sup>1</sup> A battalion group consists of an infantry battalion and supporting elements from other units to provide long-range fire support and additional logistic, medical, engineer and communications support.

## **CAPABILITIES OF THE CURRENT LAND FORCE**

The current structure of the Army is based on two light infantry battalions within a brigade framework, comprising about 4,400 regular force personnel. The Army has the ability to deploy and sustain a battalion group of 600-900 personnel for up to one year. It can provide a larger force (900-1,200 personnel) for a Chapter VII operation for six months. Either type of deployment can be extended if: other nations are able and willing to provide some of the force elements; the length of operational tours is extended beyond the planned six month period; the time between deployments for individuals is shortened from the current planning period of 12 months; use can be made of the Territorial Force to augment the regular force; and specialist personnel are cross-trained and employed in secondary roles.

Even when it is equipped with the LAV III and new tactical communications equipment, the Army will still have some equipment deficiencies that limit the roles it is able to undertake:

- The current fleet of Landrovers is at the end of its useful life. Approval in principle for replacement light operational vehicles (LOV) is being sought from the Government. The estimated cost is \$60-\$110 million.
- Close-in fire support, including for protection against armoured vehicles, is inadequate.
- Suitable vehicles and sensors to equip the reconnaissance companies are required.
- There are deficiencies in command and control, and in combat service support.

With these shortcomings the Army on its own can undertake limited peace enforcement roles. It cannot sustain a battalion level commitment beyond one year without adverse consequences and it does not have the capacity to undertake a concurrent task of any magnitude while deployed on a major commitment like East Timor.

Over the medium term, other capability issues in the areas of engineer support, long-range indirect fire support, air defence, electronic warfare and combat service support will need to be addressed. There is also a need to examine the implications of new technology in areas such as command and control, non-lethal weapons and battlefield surveillance and target acquisition.

## LAND FORCE OPTIONS

The review examined the land force structure required for three progressively higher levels of capability than the Army presently has, considering personnel strength, equipment needs, sustainability and the capability to undertake a second concurrent activity.

- The first level is the additional structure required to undertake and sustain over a period of more than 12 months a battalion group size commitment to a peace support operation, but without the capacity to undertake another concurrent commitment of company size or above.
- The second level is the structure required to undertake and sustain over a long term a battalion group size commitment to a peace support operation and to undertake concurrently another commitment up to company size.
- The third level is the structure required to undertake a battalion size commitment to a Chapter VII peace enforcement operation or mid-level combat. The key element of this option is the marginal increase in equipment required for combat as opposed to a Chapter VI peace support operation. Within this level there are two sub-options: the structure required for only a single battalion group commitment; and the second with the additional depth required to provide the capability while undertaking concurrently a commitment up to company size.

### **Chapter VI Peace Support Land Force – Single Commitment**

For the ability to deploy and sustain continuously a commitment of a battalion group (600-900) to a Chapter VI operation similar to the current East Timor commitment, largely on our own (but not to provide concurrently another commitment of a formed body of troops), the following investments would be required (in addition to the acquisition of LAV III, tactical communications and replacement light operational vehicles):

- An increase in the regular force strength of the Army from the current level of 4,400 personnel to 5,400 personnel. This filling out of existing units would increase the operating cost of land force outputs by approximately \$50 million annually. There would also be some incremental equipment and accommodation costs.
- Acquiring reconnaissance vehicles and sensors (\$50 million).
- Acquiring area close support weapons and all weather sights (\$20 million).
- In the medium term, additional investments would be required in engineer equipment for mobility and protection, combat service support, non-lethal weapons and electronic warfare.

### **Chapter VI Peace Support Land Force – Concurrent Commitments**

Providing the Army with the capacity to undertake a company size task at the same time as being able to commit a sustainable battalion group requires the Army to move to a three battalion structure. Providing the Army with a three battalion capacity could be done in one of three ways or a combination of all three:

- Raise a third battalion permanently. This would increase the size of the Army from 4,400 to about 7,000, increasing the cost of Army outputs by about 40%. (The current operating costs of the Army are about \$400 million, Outputs 7,8&9). There would be additional start-up costs associated with equipping, basing and overheads in the region of several hundred millions dollars.
- Raise a third battalion temporarily when required, by increasing personnel levels on a short term basis through recruiting and employing personnel for fixed three-year terms. The throughput of trained personnel, who could be offered trades training following deployment as an incentive, would also contribute to government's social and economic priorities. The feasibility and identification of the costs of this option requires further detailed study, but it would appear to be an attractive, cost effective way of increasing the depth of the Army on an as required basis.
- Provide the capacity for a temporary third battalion deployment through cross employment of existing regular force personnel and enhancing the ability of Territorial Force personnel to serve on operational commitments. The cross training of specialists is considered to be a minimum cost expedient that has many drawbacks. It should be done only on a voluntary basis and personnel should not be expected to be cross-employed more than once in a five year period. The morale of cross-employed personnel becomes a factor and the option assumes that personnel can be spared from their primary duties for both the cross training and cross employment.

Personnel of the Territorial Force make a significant contribution to the Army's ability to sustain operational commitments. Under current circumstances very few Territorial Force personnel can be available for an initial deployment but their participation in long-term operations can be built up to around 10% of the force. This level of contribution could be improved through: increasing the size of the Territorial Force to provide a larger base to draw from; providing job protection for Territorial Force personnel; and by providing more latitude for calling out the Territorial Force.

### **Land Forces – Chapter VII Peace Enforcement and Mid-Intensity Combat**

Undertaking Chapter VII peace enforcement missions or mid-level combat would require the commitment of a larger size battalion group (900-1,200 as opposed to 600-900 for Chapter VI operations). Because specialist personnel are needed for their primary function in combat, it would not be possible to increase the ability of the NZDF to sustain a commitment by cross-employment of personnel. It would also be necessary to acquire a medium range anti-armour weapon (\$20 million). Additional capability issues that arise in the medium term are in the areas of engineer support, long-range indirect fire support, air defence and electronic warfare.

With this additional equipment, and a personnel increase of 1,000, the NZDF (5,400) would be able to deploy a battalion group of up to 1,200 personnel and sustain it for 12 months. With three battalions the NZDF (7,000) could sustain a commitment of this size continuously and undertake concurrently, for a limited time, a company size task.

## CONCLUSIONS

The Phase I analysis showed that to meet the full spectrum of potential requirements consistent with the Government's Defence Policy Framework, the NZDF should have the ability to deploy and sustain a self-sufficient battalion group. At present the NZDF cannot sustain a commitment of this size beyond a period of 12 months without adverse consequences. To be able to sustain a full battalion group commitment, the NZDF requires additional personnel.

The major and most urgent capital investments required in the Army will be completed with the light armoured vehicle, tactical communications and light operational vehicle projects. For other capital investment, there is only a marginal difference between the near term acquisition needs for peacekeeping operations and combat situations - \$70 million for peacekeeping and \$90 million for combat. The more significant cost impact derives from possible increases in personnel strength.

The analysis has shown that government has a spectrum of options for retention and development of land force capabilities. These options are summarised on the next page. Depending on the option chosen, the suggested priorities for providing land force capabilities required to meet core requirements are as follows:

### Capital Acquisition Priorities

1. Acquiring new light operational vehicles.
2. Acquiring an area close-in fire support weapon system.
3. Acquiring reconnaissance vehicles and sensors.
4. Acquiring medium range anti-armour weapons.
5. Undertaking definition studies to address the medium term capability issues so that other investment proposals can be developed as part of a new long-term capital acquisition plan.

### Personnel Strength Priorities

1. Developing a programme to maximise the use of Territorial Force personnel to sustain operational commitments, including the drafting of legislation to provide job protection and provide greater latitude for call out Territorial Force personnel.
2. Investigating the feasibility of raising personnel levels on a temporary, short term basis through recruiting and employing personnel for fixed three year terms.
3. Increasing the strength of the Army from 4,400 to 5,400 personnel.
4. If other options for providing a three-battalion capacity are inadequate, raising a permanent third battalion.

The affordability of these options will need to be considered in the context of the overall capability blueprint that will be developed following completion of Phase 2 of the capability reviews.

LAND FORCE CAPABILITY OPTIONS												
Operation Capability	Chapter 6 Battalion Commitment (600-900)		Chapter 6 Battalion Commitment Plus Company Task		Chapter 7 Battalion Commitment (900-1,200)		Chapter 7 Commitment Plus Company Tasks		Incremental Cost	Satisfaction of Security Outcomes and Defence Policy Objectives	Operational Risk	Financial Implications
Sustainment Capability	12 months	Continuous	12 months	Continuous	12 months	Continuous	12 months	Continuous				
Current Land Force Structure (4,400 personnel)	Yes	No	No	No	6 months only	No	No	No	Nil	Low	High	Low
Increase Personnel by 1,000 to 5,400	Yes	Yes	Yes	No	Yes	No	No	No	\$50 million+	Good	Medium	Moderate
Increase Personnel to give a third battalion capacity (7,000 personnel)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Army Output costs could increase by about 40% plus substantial start-up costs	High	Low	High
Additional Capital Investment Near Term	LOV (\$60-\$110 million) Reconnaissance vehicles/sensors (\$50 million) Close support weapons (\$20 million)				LOV (\$60-\$110 million) Reconnaissance vehicles/sensors (\$50 million) Close support weapons (\$20 million) Medium range anti-armour weapon (\$20 million)				Chapter 6: \$130 - \$180m  Chapter 7: \$150 - \$200m			
Medium Term Capability Issues	command and control engineering equipment non-lethal weapons combat service support electronic warfare battlefield surveillance and target acquisition				command and control engineering equipment non-lethal weapons combat service support long range indirect fire support air defence electronic warfare battlefield surveillance and target acquisition				To be determined			

## SEALIFT

Deployment of land forces could require both strategic and tactical sealift. Strategic sealift involves movement of heavy and large equipment and stores from New Zealand to an assembly area, normally a fixed port, where the equipment is married up with personnel deployed by air. In some circumstances delivery may be directly into the operational area, either to an available port facility or, if a wharf is not available, to a location where unloading can be accomplished “over the beach”.

Tactical sealift requires a capability to deliver both personnel and equipment directly into the operational area so that the forces are able to undertake operational missions as soon as they are safely ashore. Tactical sealift ships are specially designed to land both personnel and equipment without requiring access to a port facility.

Both requirements were demonstrated in the deployment of the New Zealand contingent to East Timor. Strategic sealift was provided by a chartered commercial roll on-roll-off (RO-RO) ship, from New Zealand to the assembly area at Darwin. From Darwin, the equipment was deployed into the Suai operational area by a French military tactical sealift ship which had the ability to off-load the M113 carriers and heavy trucks over the beach.

A limited over the beach capability can be built into a modified RO-RO ship through a combination of cranes on the deck, cargo-landing vessels carried on the ship (LCVPs) and using helicopters. These facilities are suitable for containers and light vehicles but not for heavy loads such as the LAV IIIs, heavy trucks and engineering equipment.

Given the relatively small number of available port facilities in the South Pacific and parts of South-East Asia, an ability to off-load cargo independently over the beach would be a useful military and civil asset. However, the requirement to independently off-load heavy military cargoes, such as LAV IIIs, in this manner is likely to be very infrequent. In most circumstances the limited over the beach capability that can be built into a RO-RO vessel will meet New Zealand’s military requirements. On those occasions when heavier loads need to be off-loaded where port facilities are not available, it is likely to be under circumstances where New Zealand would be operating as part of a multinational force. Tactical sealift ships of other nations would be available to provide this capability.

For some disaster relief operations in the South Pacific it could be expected that port facilities do not exist or have been damaged. However, the supplies required for disaster relief can generally be unloaded from a ship by LCVPs or by helicopter. They can also be air-dropped or air landed by C130 Hercules and other aircraft. It is only when heavy engineer plant and vehicles are needed that a full over the beach capability would be required. This requirement has not arisen in disaster relief operations to date.

The NZDF requirement for military sealift is sporadic. Any ship that is owned and operated by the NZDF primarily for strategic or tactical sealift therefore would be available for other tasks, including disaster relief in a civil emergency in the South Pacific, low-level surveillance and presence, and logistic support to deployed forces. In general, the speed, manoeuvrability and lack of combat systems limit the utility of a sealift ship for most maritime patrol tasks.

The hull design can make these ships unsuitable for safe employment in the Southern Ocean or Ross Sea. A sealift ship can be a valuable contribution to a multinational effort in its own right. A sealift ship could have been gainfully employed for the operations in Bougainville, East Timor and Solomon Islands.

A dedicated sealift ship would be available to the NZDF for immediate tasking for 90% of the year. In the absence of an operational deployment the military requirement for exercises and other tasks would amount to about 80-105 sea days per year.

The key considerations in determining how best to meet New Zealand's sealift requirement are:

- **Availability** to meet the requirement for a timely deployment.
- Sufficient capacity for **strategic sealift** of a battalion group size land force, with supporting helicopters and national support elements.
- The degree to which an **over the beach capability** and **tactical sealift** is required and its affordability.
- The **utility for other tasks**.

### **The Options**

Four options were considered for providing sealift: 1) reliance on commercial chartering arrangements; 2) acquisition of a used military sealift ship; 3) purchase of a new purpose built ship; and 4) modification of CHARLES UPHAM.

The purchase and conversion of another used RO-RO vessel and the acquisition of a new modified design RO-RO vessel were also examined. Both of these possibilities were found to have no significant advantage over the modified CHARLES UPHAM and carried significantly higher costs and risks.

### **Chartering**

This was the approach taken for Bosnia and East Timor and it is the cheapest option. It has two drawbacks. One drawback is that there can be no guarantee a suitable ship will be available when there is a need for a rapid response. Previous studies have shown that ships available for charter are usually operating at long distances from New Zealand. This potentially prolongs the time taken to deploy a New Zealand contingent. The other drawback is that commercial ships come as they are. They cannot provide any tactical sealift capability. This can limit choices in responding to a security event. The limitation could be significant for situations where there is a requirement for New Zealand to be independent in its response.

In the case of Bosnia the charter arrangement was unsatisfactory, both because of availability and because the shortcomings of the ship required vehicles to be stowed on open decks. In the case of East Timor the charter arrangement was satisfactory.

### **Acquisition of a Used Military Sealift Ship**

Military sealift ships being offered for sale are usually older generation specialist amphibious landing ships nearing the end of their useful life. The initial capital cost of these second hand landing ships can be low but the work necessary to modify and maintain military specification ships is usually significant, costly and technically more difficult than for commercial specification ships because of greater complexity and heavier build standards. Many older military sealift ships require a large crew (200 for the Newport class acquired by Australia versus 50 for CHARLES UPHAM). Through life cost penalties can completely offset advantages of a low initial purchase price.

Recent conversions of ex-USN Newport class amphibious ships by Australia required a considerable amount of restorative maintenance and significant modernisation to tailor to Australian needs. The final conversion cost price was about A\$200M per ship.

Although this option provides a good over the beach capability, given the high conversion and operating costs, it is unlikely to offer any significant advantage over modification of a commercial vessel.

### **Purchase of a Purpose-Built Ship**

The concept of using a multi-role ship to perform sealift tasks and also a range of tasks such as resource protection to reduce loading on the frigate fleet requires a wider study than could be completed within the time constraint for the completion of the Phase I review. Issues such as trade-offs in frigate availability, crew combat training, sustainability, and logistics support are complex. In catering for the differing roles in a multi-role design, each role will invariably be compromised to some extent. This is a possible option, however. A ship purpose built for tactical sealift could also be designed to carry out tasks such as disaster relief, EEZ surveillance and patrol, search and rescue, and presence. It could support service assisted evacuations of nationals, provide a command and control facility for land force operations, and provide a host platform for peace talks. When suitably modified, CHARLES UPHAM could do some of these tasks under certain conditions, although it could not operate a helicopter while underway. Lack of armament may be a limitation for some surveillance, response and emergency evacuation missions.

Both the Royal Navy and Republic of Singapore Navy have new tactical sealift ships which have utility in other roles - HMS OCEAN and RSS ENDURANCE. HMS OCEAN's capabilities exceed the NZDF requirement. The RSS ENDURANCE, however, presents a compromise that could meet many of the NZDF's requirements. Its design emphasises the tactical sealift role ahead of strategic utility. The vessel could transport and offload heavy vehicles up to LAV III size without port access. It has two on-board helicopter operating positions, and can operate helicopters at sea. The RNZN Seasprite could be operated on such a ship and the decks are capable of taking larger helicopters operated by other nations. It has a troop carrying capacity in excess of the New Zealand requirement.

This class of ship is better suited for patrol and surveillance tasks than the CHARLES UPHAM, in that it can carry its own helicopters and operate them at sea. It also carries a 76mm gun. The tactical unloading facility comes at the expense of lift capacity. RSS ENDURANCE has only half the strategic lift capacity of a modified CHARLES UPHAM. This option therefore only partially meets the strategic lift requirement, while it fully meets the tactical requirement.

No data is available for the cost of a new multi-role capable sealift ship designed specifically for New Zealand. Using RSS ENDURANCE as an example, the marginal cost of a multi-role ship over modifying CHARLES UPHAM is expected to be around \$400m. However, if this ship also replaces CANTERBURY, the marginal cost would largely disappear. A more detailed study would be required to assess the economic benefit of a single multi-role ship meeting both the sealift requirement **and** some of tasks currently assigned to the naval combat force, i.e. as a replacement for both CHARLES UPHAM and CANTERBURY. A suitable ship could not be acquired before 2005.

### **Modification of CHARLES UPHAM**

When modified for its role as a sealift ship, CHARLES UPHAM will have the capacity to meet the NZDF requirement for strategic sealift and will have a limited tactical sealift capability with deck cranes, on board LCVPs and, when anchored, the ability for helicopter sling loading from the deck. It can carry a small company of troops with their equipment, giving the ability to position forces close to a potential trouble spot. The modified CHARLES UPHAM will not have the ability to unload, over the beach, the LAV IIIs, heavy trucks or heavy engineer plant equipment.

The modifications envisaged will enable the vessel to undertake disaster relief and humanitarian operations. It will have the capacity to supply fuel and water supplies over the beach, provide emergency short-term shelter and evacuate a large number of people.

The design for the modification is partially done and can be completed within six months. The modification work can be undertaken following a worldwide competitive tender, or by a shorter directed tender process for New Zealand industry. The earliest the modified ship could enter service is January 2003. Conversion is technically simple, the basic ship structure can easily accommodate it, and the condition of the ship's structure is well known through the extensive assessment conducted within the Lloyds class survey. Based on the design and specification work done to date, it is assessed that conversion of CHARLES UPHAM is a low risk option and the ship would have a 15-year post-conversion life. The estimated cost of the conversion is \$35-40 million.

### **CONCLUSION**

A summary of the four options is shown in chart form on the next page.

Acquiring a used military ship is costly and risky and is unlikely to offer any significant advantage. The modified CHARLES UPHAM has some shortfalls in off-loading cargo where ports are not available, but this is not assessed as presenting a significant military risk. It also has limitations in its suitability to undertake other tasks when not used for its primary sealift function. A ship like the Singaporean ENDURANCE class has a better over the beach capability and is more versatile. It has only half the strategic lift capacity of CHARLES UPHAM, however, and it costs significantly more – in the region of \$440 million as opposed to an additional \$35-\$40 million to modify CHARLES UPHAM. It may, however, be a viable single platform replacement for both CHARLES UPHAM and CANTERBURY. The cheapest option is to sell CHARLES UPHAM and rely on chartering. A modified CHARLES UPHAM is the most cost effective option for meeting the core requirement for assured strategic sealift.

### Summary – Sealift Options

	<b>CHARTER</b>	<b>USED MILITARY SEALIFT SHIP</b>	<b>PURPOSE BUILT SHIP</b>	<b>CHARLES UPHAM</b>
<b>Availability</b>	Uncertain	High	High	High
<b>Strategic Sealift Requirement</b>	Uncertain but probable	Partial	Partial	Meets fully
<b>Tactical Sealift Requirement</b>	None	Meets fully	Meets fully	Partial
<b>Utility for Other Tasks</b>	N/A	Moderate	Better	Moderate
<b>Capital Acquisition Cost (Incremental)</b>	Nil	\$260 million	\$440 million	\$35-40 million
<b>Annual Operating Costs</b>	Unknown, but low cost	\$40 million	\$54 million	\$13 million
<b>Earliest In-Service Date</b>	N/A	2005	2005	2003
<b>Life of Type</b>	N/A	20 years	30 years	15 years
<b>Overall Risk</b>				
<b>-Operational</b>	Highest	Moderate	Moderate	Lowest
<b>-Financial</b>	Lowest	High	Highest	Low

### Box 1 – New Zealand Security Environment

The External Assessments Bureau report *Strategic Assessment 2000* (SA2000) identified the key features and trends of New Zealand's security environment, both immediate and regional, as well as those at the global level which are of particular relevance to New Zealand from a security and defence perspective.

SA2000 acknowledged that New Zealand is not directly threatened militarily by any other country and is unlikely to be involved in any widespread armed conflict within the next five years.

Despite this, SA2000 noted that New Zealand is nevertheless likely to be confronted over the next five years by a number of security challenges. In the Asia-Pacific region,<sup>2</sup> it envisaged the following challenges:

- competition for marine resources in the waters around New Zealand;
- dealing with problems created by weak governments in the Pacific Islands;
- ineffective or unstable government in Indonesia raising issues of internal stability;
- potential challenges to the balance of power in the region, particularly in respect of Taiwan, the Korean Peninsula, and nuclear confrontation in South Asia;
- meeting Australian security challenges; and
- possible deterioration in the US-China relationship which could lead to a new "cold war".

For the rest of the world, SA2000 identified these security challenges:

- pressures on the *multi-lateral system* in the form of:
  - US propensity to act unilaterally;
  - Disagreement on reform of UN political and financial structures;
  - challenges to nuclear non-proliferation and associated regimes;
  - developing countries' resistance to international scrutiny of their internal affairs on the grounds of good governance and human rights; and
  - intra-state conflicts, resulting from communal (linguistic, racial or religious) disputes, and splits over the use of international intervention.
- reactions to globalisation including the pressures to incorporate social and environmental agendas, and improve developing countries access to markets;
- US expectations of international support in its fight against terrorism and rogue states;
- effective control of a range of global illegal trades such as drugs, people and money.

SA2000 also foreshadows the possibility of **peacekeeping operations** in the Middle East, Africa, the Balkans, the Indian sub-continent, and the Korean Peninsula.

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<sup>2</sup> For the purposes of SA2000, the "Asia-Pacific" was defined as comprising the countries of Asia from Mongolia and China south to Indonesia, with Australia, New Zealand and the Pacific Islands. It was noted that South Asia, Russia, North America and Latin America all impinge on this region and they were included in SA2000 in specific contexts.

## INTRODUCTION

### BACKGROUND

In June this year *The Government's Defence Policy Framework* (DPF) was released. It outlined the key principles of the Government's defence policy and has been guided by and builds upon the Foreign Affairs, Defence and Trade Committee *Inquiry into Defence Beyond 2000*. It also took account of the External Assessments Bureau report *Strategic Assessment 2000, which identified the key features*, and trends of New Zealand's security environment, as well as those at the global level which are of particular relevance to New Zealand. (see Box 1). The Ministry of Foreign Affairs and Trade's *New Zealand's Foreign and Security Policy Challenges* accompanied the DPF. These four documents provide the top-level strategic policy guidance for the capability review process.

The key elements of the Government's defence policy are:

- New Zealand's defence and security policies will be based on its own assessment of the security environment and the actions it considers to be in New Zealand's best interests.
- The primary reason for maintaining a defence force is to secure New Zealand against external threats, protect its sovereign interests, and be able to take action to meet likely contingencies in New Zealand's strategic area of interest.
- New Zealand will work collaboratively with like-minded partners. In this context, there is no strategic partnership closer than that with Australia. New Zealand will continue to meet its obligations as a member of the Five Power Defence Arrangements (FPDA)<sup>3</sup>.
- New Zealand has special obligations to Pacific neighbours to assist in maintaining peace, preserving the environment, promoting good governance and helping achieve economic well being. New Zealand wants a secure neighbourhood and must work towards that.
- Peace Support Operations (PSOs) are important for maintaining security and stability. New Zealand will make as full a contribution to such actions as is reasonably possible. New Zealand's global engagement will be based on active support for, and participation in, UN and appropriate multinational PSOs.
- The Government will continue to maintain a nuclear free New Zealand and protect the integrity of its nuclear free policy. It will also promote a nuclear free South Pacific.
- Except as part of PSOs, New Zealand will not engage in military cooperation or exercises with the armed forces of states which sanction the use of their armed forces to suppress human rights.

The Government has established five key objectives for New Zealand's defence policy. These are:

- to defend New Zealand and to protect its people, land, territorial waters, EEZ, natural resources and critical infrastructure;
- to meet our alliance commitments to Australia by maintaining a close defence partnership in pursuit of common security interests;

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<sup>3</sup> The FPDA comprises New Zealand, United Kingdom, Singapore, Malaysia and Australia.

- to assist in the maintenance of security in the South Pacific and to provide assistance to our Pacific neighbours;
- to play an appropriate role in the maintenance of security in the Asia-Pacific region, including meeting our obligations as a member of the FPDA; and
- to contribute to global security and peacekeeping through participation in the full range of UN and other appropriate multilateral peace support and humanitarian relief operations.

The DPF sets out the Government's broad strategic outcomes, its defence policy objectives and the roles and tasks envisaged for the New Zealand Defence Force (NZDF). To meet these objectives the NZDF must be able to offer an adequate range of capabilities that are sustainable, safe and effective in combat and in peacekeeping and structured for maximum operational and political impact. The core requirement is for well-equipped, combat-trained land forces that are also able to act as effective peacekeepers, supported by the Navy and Air Force.

### **The Capability Reviews Process**

To ensure there is a sensible prioritisation of investments that will give the NZDF the depth it requires, the Government directed that NZDF capabilities be reviewed to provide a basis for a new capability blueprint and a re-prioritised long-term capital equipment plan. This plan will then form the basis of a new programme of capital acquisition. Consistent with the DPF, the aim of the review process is:

To provide advice to the Government on the range of military capabilities required to meet its defence policy objectives that are sustainable, safe and effective in combat and peacekeeping and structured for maximum operational and political impact.

Military capability is the ability to undertake assigned roles and tasks to an acceptable level of competence. It encompasses people, their education and training, the equipment they use, their deployment to the area of operations, and doctrine and organisational structure that underpins their activities. Capability is generally employed in a joint and combined environment, and is dependent on the synergy obtained from co-ordinating and integrating the activities and characteristics of different armed services of a number of nations for its effectiveness.

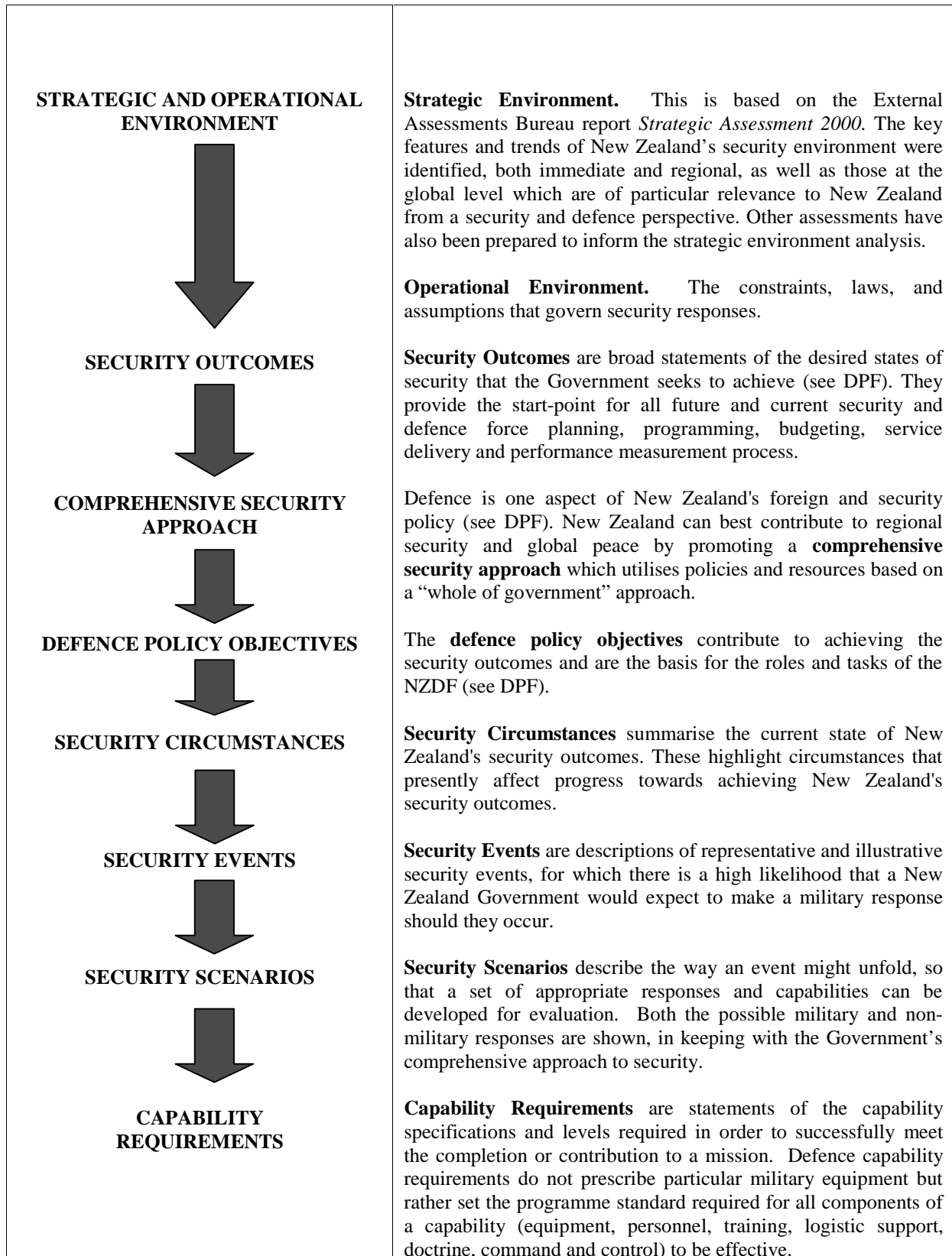
The report on land force capability has focused almost exclusively on the capabilities it needs to conduct its immediate assigned tasks. Thus it presents a picture of only one part of a combined operation. It does not show the interrelationships that exist firstly, among the three New Zealand services and secondly, among the national participants in the joint and combined environment. These interrelationships consist of dependencies in raising, training, equipping, deploying, protecting, supporting, and recovering the land force.

The analysis<sup>4</sup>, in concentrating on what the land force does once it is established in its area of operations, takes a land-centric approach that largely ignores other linked capabilities. For example, deployment of the land force by aircraft and sealift ship is assumed, but analysis of

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<sup>4</sup> Although this Land Review is land-centric, joint operations and the roles and relationships with the other services will be examined in more detail in Phase II.

## Box 2 - The Capability Review Process



options for contributing to the escort and protection of the ship, aircraft, and soldiers into and within the area of operations are not evaluated.

Similarly, the report does not indicate how other capabilities are used to bring the land force to a preparedness state from which it can be committed to joint and combined operations. Nor does it illustrate the way use of the various capabilities of the NZDF in joint and combined exercises and training instils a joint/combined culture and awareness.

The analysis does not explore how the land force in isolation contributes to other international engagement goals, as the national objectives are largely based on how the NZDF as a whole will contribute. For example, engagement in FPDA activities is primarily an air defence activity involving aircraft and ships. No land force participation is envisaged in the medium-term. These are the tasks of the second phase of the study.

The reviews are being done in phases. The first phase outlined in this report identifies options for conventional land forces<sup>5</sup> and associated sealift. The second phase will provide advice on the complete range of capability options that satisfy the Government's defence policy objectives. The Phase Two report will incorporate whatever decisions the Government takes as a result of the Phase One report, as well as the outcome of the review of maritime patrol that is being led by the Department of Prime Minister and Cabinet.

### **The Process for Assessing the Requirements for Land Forces and Associated Sealift**

In reaching conclusions about the Government's requirements for land forces and associated sealift, a key issue is to determine the type of **security events** for which these capabilities are likely to be required. These events are derived from the Government's **security outcomes** and **defence policy objectives** outlined in the DPF. They are also based on an assessment of **New Zealand's strategic environment** and the key trends in the wider international security environment. The process for translating government policy into the capability requirements for the land forces and associated sealift is represented schematically in Box 2.

Assessments of the **security circumstances** for each of the Government's five security outcomes are used to identify the plausible **security events** for which the Government may require an NZDF response (these are outlined in the security requirements described later).

Selected security events have been used to develop **security scenarios**. These describe how a particular security event may unfold. They are used to identify possible government responses and to assess the capabilities the NZDF would require in order to provide an appropriate response. Both the possible military and non-military response options are shown, in keeping with the Government's **comprehensive approach to security**.

Scenarios do not reflect any particular 'real-world' events, nor do they predict where, when and how events may develop in the future. They are plausible, however, insofar as they are representative of the dynamics that occur in such situations and are informed by 'real-world' experiences and events, especially in terms of the nature and causes of conflict. Similarly, the information contained in the scenarios does not aim to cover the complete picture in detail. Rather, it seeks to provide sufficient information to enable analysis of the tasks, conditions and effects required in conducting a specific military mission.

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<sup>5</sup> Phase I of the reviews will not consider those aspects of land forces structured for non-conventional operations, that is, the Special Air Services. A separate review is examining these capabilities and the results will be included in the Phase II report.

The **scenario based strategic planning methodology** outlined in the previous paragraphs is in wide use in other countries for defence planning. It represents best practice to meet the reviews' objectives. It also offers the advantages of establishing a direct linkage with policy goals, is not based on specific threats, and avoids being captured by the status quo. Instead of answering the question "*what use can we make of this capability or military technology?*", it focuses on answering the question "*what capabilities and technologies does the government need to meet its defence policy objectives?*"

### **The Use of Scenarios**

Some 50 potential security events have been identified which may require a response from Government. It is not necessary to develop a scenario for each event: many are similar in nature, some dissimilar events invite similar responses, and military and non-military tasks are common across many scenarios. Some events are relatively minor and the response can therefore be generated using capabilities identified within more complex scenarios. Other potential tasks, either of a development or humanitarian nature, are less demanding as stand alone tasks and therefore do not drive any additional capability requirement. In many cases, however, these tasks also exist within the scenarios where they will need to be conducted within a military environment. As such, they are adequately catered for within the framework of the reviews.

A limited number of scenarios were developed in two distinct but closely related sets. The first set are those required to drive out the range of capabilities that might be required by a New Zealand contribution to a peace support operation which is dominated by land forces with New Zealand naval and air forces providing support. These are the scenarios required for Phase One of the review. The second set drive out the wider range of NZDF capability requirements and will be considered during Phase Two of the review. In keeping with best practice, sufficient scenarios are developed to ensure that the full range of capability responses is identified.

Each scenario is a series of incidents, which can be grouped into defined phases during the evolution of a security event. In describing the way each event might unfold, each scenario has been developed to show six distinct phases in the life cycle of the event to which it refers. Phases differ between scenarios to reflect the different way that individual events unfold. Each of these phases is then considered through a succession of 'lenses' as part of a strategic assessment to determine the Government's options and the risks involved. Analysis of military factors to determine potential NZDF missions, the strategic options to fulfil these and the ensuing tasks and risks follows.

### **New Zealand's Security Interests**

In considering New Zealand's security interests the DPF considers the world in five spheres of interest, moving from the immediate to the more distant in geographic terms. Each of these areas is now considered in turn. For each, the **security outcomes** from the DPF are identified along with the defence policy objectives. The security circumstances applicable to the particular sphere are detailed followed by the range of security events considered by the review. Following each summary, the particular scenarios used in the review for detailed analysis are identified and briefly discussed. The following tabulated sections summarise the first seven steps in Box 2.

## NEW ZEALAND AND ITS ENVIRONS



### SECURITY OUTCOMES

*A secure New Zealand, including its people, land territorial waters, Exclusive Economic Zone (EEZ), natural resources and critical infrastructure:*

- a New Zealand free from significant interference by external forces in its EEZ, territorial waters, the Antarctica and the Southern Oceans;
- a New Zealand free from threats to its territory, natural resources and critical infrastructure;
- New Zealanders free to go about their lawful business without interference or threat to their physical safety;
- a highly skilled and educated national labour force able to sustain and build an inclusive, innovative and prosperous economy.

### DEFENCE POLICY OBJECTIVES

*To defend New Zealand and to protect its people, land, territorial waters, EEZ, natural resources and critical infrastructure:*

Within New Zealand and its neighbourhood, the NZDF will be used to:

- ensure the sovereignty of our EEZ and territorial waters;
- protect our interests in the Southern Ocean and Ross Dependency;
- counter any threat posed by terrorism or acts of sabotage;
- provide support in civil defence and other emergencies;
- contribute to the Government's social and economic priorities by providing opportunities for training and rewarding careers.

### SECURITY CIRCUMSTANCES

The following are the key features affecting the security of New Zealand and its surrounding area:

- **New Zealand** (and Niue, the Cook Islands, and Tokelau for which New Zealand has a defence responsibility) **does not face any direct military threat** now or in the foreseeable future but it does face a number of lower-level security challenges and issues of concern.
- **New Zealand sovereignty over one of the largest maritime environments in the world and territorial interest in the Antarctic will come under increasing pressure.** **Fish resources** (in New Zealand's EEZ, the Southern Ocean and Antarctic waters), are **likely to be increasingly targeted** by the world's fishing fleets as a result of growing international demand for high quality fish, the decimation of Northern Hemisphere fisheries and a shortfall in global fisheries catch. Evasion methods are likely to become more deliberate and refined as pressures grow. Current and proposed international agreements on fishing and resource exploitation in the Southern Ocean and Antarctic waters will place demands upon New Zealand's monitoring and enforcement resource.
- **Trans-national crime is a risk to New Zealand's security.** There is an apparent trend towards targeting New Zealand and the small island states associated with it. Crimes such as drug-trafficking, money laundering and fraudulent business dealings based on flags of convenience are becoming increasing problems. **Illegal immigration is also a problem** and unlikely to abate. It may well take the form of boat landings, as in Australia. Australian experience demonstrates that effective maritime surveillance, including co-operating with neighbouring jurisdictions, is important in containing this risk.
- Expanding sea and air access is **increasing the risk of bio-security hazards** and pressures on border control.
- **New Zealand's critical information infrastructure is vulnerable to information attacks.** These attacks may not be specifically directed at New Zealand but global interconnectivity will increase the risk of New Zealand's systems being affected by attacks on others.
- New Zealand is not immune from **terrorism**. While New Zealand remains physically distant from many areas where terrorism occurs, it can be a target in certain circumstances: when New Zealand is hosting significant events, or New Zealand is seen to take a stand at odds with some state or group. Targets can include multinational businesses and the property and personnel of foreign nationals in New Zealand. The

risk is growing that terrorists are gaining access to inexpensive and easily constructed terror weapons, including chemical and biological agents as well as improvised land and maritime explosives.

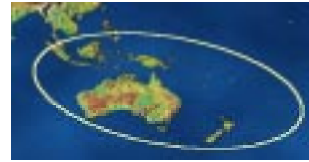
**SECURITY EVENTS** (where a military response might be sought)

- Persons lost and in distress needing assistance in New Zealand
- Natural events which threaten lives and property
- Man-made hazard or disaster in New Zealand or its environs that threaten lives and property
- Mining of New Zealand ports and approaches
- Attempted entry by groups of illegal migrants into New Zealand
- Illegal activities in New Zealand's EEZ including exploitation of New Zealand's marine resources
- Trans-national crime across New Zealand's borders
- Civil disturbances affecting delivery and maintenance of critical services
- Bio-security incidents
- **Terrorist act(s) in New Zealand**
- Accident/incident involving transport of nuclear waste in areas adjacent to New Zealand's EEZ
- Asymmetric attacks on New Zealand (*e.g.* information attacks on critical infrastructure)

**Scenario Selected**

The scenario chosen is terrorist acts in New Zealand. Much of the capability to address such incidents lies within Special Forces and this scenario is, therefore, addressed in Phase II of the reviews.

## NEW ZEALAND AND AUSTRALIA



### SECURITY OUTCOMES

*A strong strategic relationship with Australia in support of common interests for a secure and peaceful region:*

- both nations work in continuous partnership to secure and promote the security interests they share;
- the territorial sovereignty of both Australia and New Zealand remain secure;
- Australia understands and appreciates New Zealand's commitment to common interests and is sensitive to New Zealand's particular national interests;
- an NZDF that operates effectively with the Australian Defence Force.

### DEFENCE POLICY OBJECTIVES

*Meet New Zealand's alliance commitments to Australia by maintaining a close defence partnership in pursuit of common security interests:*

- The NZDF will operate with the Australian Defence Force to protect territorial sovereignty and in support of a secure and peaceful region.

### SECURITY CIRCUMSTANCES

The key features of the security situation affecting New Zealand and Australia are that:

- **Both Australian and New Zealand territorial sovereignty is currently secure.** There is both an understanding and an expectation that in the face of serious threats to security, each country would come to the defence of the other.
- **Mutual security** is enhanced by the high degree of co-operation and co-ordination that exists between the governments and defence forces of both countries. Australia sees defence links with New Zealand as central to the strength of the Australia-New Zealand relationship. NZDF effectiveness is enhanced by both countries working closely with each other in training and exercising, operations, procurement and capability development.
- New Zealand's proximity to Australia and similarity of social, cultural and economic outlook means that often the strategic and security interests of both countries coincide. Nevertheless, the potential exists for **differences of policy and approach** to particular security issues as Australia and New Zealand make their own independent assessments of regional security events. Australia places a high priority on its US security relationship, seeing it as crucial for preferential access to leading-edge technology and equipment, strategic intelligence and logistic support, as well as the deterrent effect of the link with a global power.
- The **region to the north of Australia** has experienced a number of destabilising crises and unanticipated events which has created a security environment that is seen, particularly by Australia, as less stable and predictable than previously. Australia sees its primary security challenges as a weak and unstable Indonesia, growing internal unrest and instability in Papua New Guinea and Solomon Islands, the rebuilding of East Timor, incursions into its maritime approaches to the north, and illegal migration. Accordingly, Australia's security strategy focuses on pro-active contributions to regional security, and preparations to deal with potential threats by achieving strategic dominance over its maritime approaches.

- Australia's size and **“middle power” outlook** can mean that on occasions it overlooks the interests of smaller neighbours. On security issues there has been a tendency in some quarters to under-rate New Zealand's interest and role. This has been partially offset at present by New Zealand's level of commitment to East Timor operations. Security will, however, remain an area where management of the relationship will continue to be tested.

#### **SECURITY EVENTS**

- Significant natural events which threaten life or property in Australia and its environs
- Emergency resulting from human hazard or disaster in Australia or its environs
- Exploitation of at-risk marine resources that affect both Australia and New Zealand
- Australia and New Zealand co-hosting an international event that may encourage terrorist acts
- External threats to either Australian and New Zealand sovereignty

#### **Scenario Selected**

The scenario selected is an external threat to either Australian and New Zealand sovereignty. This is considered in Phase Two of the review as such a situation is likely to require a New Zealand commitment of maritime and air capabilities.

## NEW ZEALAND AND THE SOUTH PACIFIC



### SECURITY OUTCOMES

*A secure and stable South Pacific composed of nations that provide effective democratic governance to their peoples, build self-sustaining economies to meet the needs of their peoples and contribute materially to the security of their territories and resources:*

- the territorial integrity of the Cook Islands, Niue and Tokelau is maintained;
- the safety and human rights of New Zealand citizens and other nationals are protected in the event of civil emergencies in the South Pacific;
- New Zealand's international obligations for search and rescue in the South Pacific are met;
- a South Pacific where the sovereignty of member states' EEZs is respected and observed;
- a South Pacific which is free from internal strife and civil war, and violent conflict between neighbours;
- a South Pacific of nations which have the economic and human capacity to contribute materially to their own security needs;
- a South Pacific of nations whose natural environment and resources are managed sustainably in ways that support economic viability;
- a South Pacific of nations that are able to minimise the social and economic impacts of natural and other disasters and recover rapidly from them.

### DEFENCE POLICY OBJECTIVES

*To assist in the maintenance of security in the South Pacific and to provide assistance to New Zealand's Pacific neighbours:*

*In the South Pacific, the NZDF will be used to:*

- meet New Zealand's constitutional responsibilities for the defence of the Cook Islands, Niue and Tokelau;
- contribute to maintenance of peace and stability in the South Pacific;
- meet New Zealand's international obligations for search and rescue and for emergency medical evacuation;
- strengthen New Zealand's relationships in the Pacific through our Mutual Assistance Programme, including providing defence assistance and Official Development Assistance delivery;
- assist with surveillance of Pacific Islands countries' EEZs;
- provide protection for, and if necessary assist in the evacuation of, New Zealand nationals in civil emergencies;
- provide assistance after natural and humanitarian disasters.

### SECURITY CIRCUMSTANCES

The key features affecting New Zealand's relationships in the South Pacific are that:

- South Pacific island states are confronting many **challenges to their security and viability**, including failing governance and infrastructure, marginal economic viability, ethnic and demographic stress, secessionist tendencies, disputes over ethnicity and resource distribution, small arms and traditional weapons proliferation, urbanised unemployment, increasing crime, exploitation of the natural resources of South Pacific countries in potentially unsustainable ways, and trans-national crime including trafficking in drugs, people, and other illegal goods.
- Given current indicators there is a **strong prospect of further emergencies** on the pattern of the 1980s and 1990s.

- New Zealand has strong cultural, constitutional, political and economic links with South Pacific island countries. There is, therefore, an expectation in the region and further afield that New Zealand, along with Australia, either independently or in co-operation with each other, will carry the **main burden of response** and requests for assistance to these crises. Evacuation of New Zealanders and other expatriates has been an issue on several occasions.
- Other states, particularly Australia, and regional co-operative institutions are active players in the South Pacific. While differences of perspective may exist on some issues, more usually a **co-operative approach** is the norm to providing support to South Pacific island states.
- A **range of initiatives** will also be needed to **avert further security crises**, including supporting economic development, playing an active role in South Pacific institutions, applying diplomatic resources, using military aspects to support peace processes, and military and police assistance programmes to help build security capabilities appropriate for regional needs.

**SECURITY EVENTS** (where the impact is beyond the ability of Pacific Island states to provide effective responses)

- Persons lost or in distress needing assistance or rescue in the South Pacific
- Natural events in the South Pacific that threaten life or property
- Human hazard or disaster in a South Pacific island country
- Illegal exploitation of marine resources in the EEZs of South Pacific island countries
- Attempted entry into a South Pacific island country by groups of illegal migrants
- Trans-national crime threats to South Pacific island countries
- Exploitation of marine resources in international waters that affect the economic viability of South Pacific island countries
- Development failures in a South Pacific island country threatening life, economic viability and national stability
- Acts of terrorism in a South Pacific island country
- **Use of violence by secessionist/separatist movements in a South Pacific island country**
- Civil disorder and violence associated with political unrest
- New Zealand nationals needing evacuation in civil emergencies

### Scenario Selected

Of the range of security events that might occur in the Pacific, a likely event for land forces is a situation that leads to the loss of good government through the use of violence by secessionist/separatist movements in a South Pacific Island country. This scenario includes a need for a national evacuation of nationals. The scenario focus is a subsequent peace support operation to prepare the ground for rebuilding of the public sector, law and order and good governance. This enables exploration of the utility and need for particular capabilities in a low threat Pacific peace support setting. The scenario is generic but informed by the kind of developments recently observed in events spanning a number of Pacific Islands.

Other opportunities for employment of land forces in the Pacific are assessed as requiring levels of capability that are within the force determinants of this Pacific scenario.

## NEW ZEALAND AND THE ASIA PACIFIC



### SECURITY OUTCOMES

*An expanding role in the regional dialogue of South East and North East Asia and, where appropriate, a role in regional security consistent with New Zealand's interests and capabilities:*

- New Zealand has a significant and respected presence and impact in key Asia-Pacific multilateral arrangements;
- an Asia-Pacific region where all nations abide by their UN Charter obligations and international law and the human rights of all peoples are respected;
- an Asia-Pacific where current disputes have been resolved or are being contained and resolved;
- an Asia-Pacific where aggression against regional members is not tolerated and, if it occurs, is reversed by UN or regional organisation responses;
- an Asia-Pacific where the US remains responsibly and positively engaged;
- an Asia-Pacific free from aggressive domination by any country with interests which may be inimical to New Zealand;
- an Asia-Pacific which continues to build upon existing regional and multilateral institutions;
- an Asia-Pacific with a prosperous, growing regional economy based on open trading practices;
- an Asia-Pacific supportive of initiatives to manage sustainably the global ecological environment;
- an Asia-Pacific where rights of freedom of passage are respected and maintained;
- an Asia-Pacific where nations have eschewed procuring weapons of mass destruction and other destabilising weapons.

### DEFENCE POLICY OBJECTIVES

*To play an appropriate role in the maintenance of security in the Asia-Pacific region, including meeting our obligations as a member of the FPDA.*

*In the Asia-Pacific region the NZDF will:*

- continue to participate in FPDA activities;
- build upon existing co-operative bilateral defence relations with Singapore, Malaysia, Thailand and the Philippines;
- develop a broader-based defence dialogue with other nations in East Asia.

In East Asia, New Zealand's security policy will include active participation in important regional fora such as APEC and the ASEAN Regional Forum; a constructive approach to regional human rights initiatives; and, where necessary and feasible, mediation and PSOs.

## SECURITY CIRCUMSTANCES

The key features affecting New Zealand's interests in the Asia-Pacific region are that:

- While recovering from the Asian financial crisis, the **Asia-Pacific region is basically stable**. However, a number of trouble spots in the region (the Korean Peninsula, Taiwan/China, the South China Sea and South Asia), could flare up and destabilise the regional and in some cases the global security situation.
- New Zealand has **significant economic and trade relationships and interests** with the countries of the Asia-Pacific which would be **affected by conflict** in any of the trouble spots, particularly if it closed the region's shipping lanes and air routes. Trade could be disrupted, and demand depressed in some of New Zealand's key markets. Conflict could also create refugee flows destabilising neighbouring states.
- **Regional security frameworks and institutions** are still in their formative stage and are not well developed to work effectively to resolve conflicts with the potential existing for the formation of pan-Asian groupings that exclude Australia and New Zealand participation in responses to regional issues.
- New Zealand diplomatic and military capabilities and activities (in regional crisis management, participation in peacekeeping or other multilateral operations, through the FDPA and in bilateral defence relations with key countries) are practical ways of demonstrating **New Zealand's commitment to collective efforts** to maintain peace and security and protect our interests.

## SECURITY EVENTS

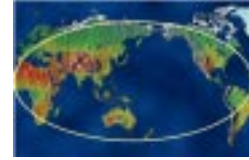
- Natural events which threaten life or property in the Asia-Pacific
- Breakdown of law and order leading to threats to New Zealand nationals
- Human hazard or disaster in the Asia-Pacific
- Serious disruption to sea lanes of communication in South East Asia
- Threats to or loss of access to airspace in South East Asia
- Trans-national crime in South East Asia that requires an international response
- **Splintering of a state in South East Asia**
- Disputes over resources that require international response
- Wars of democratisation (Destabilisation of a South East Asian country moving to democracy)
- Religious/ethnic war in South East Asia
- Territorial conflict in South East Asia
- Weapons of mass destruction in Asia
- Conflict in North Asia
- Piracy

## Scenario Selected

The scenario selected is the splintering of a state in South East Asia. A range of potential events could occur. For this review a secessionist struggle has been used. This scenario is illustrative of the kind of conflict that might lead to New Zealand involvement in a peace support operation within Asia-Pacific. More importantly, it explores the evolution of operations in such a setting and the kinds of tasks and capabilities that might be required for effective involvement. Its focus is an international peace operation led by Australia, with a contribution of a New Zealand battalion group land force.

This scenario differs from the Pacific scenario in that it is set in a higher threat environment where the mission requirements are more demanding than those likely to be encountered in the Pacific.

## NEW ZEALAND AND THE REST OF THE WORLD



### SECURITY OUTCOMES

*A global approach which supports New Zealand's place in an international community committed to the maintenance of human rights and the collective security responsibilities enshrined in the UN Charter, and which strengthens New Zealand's economic linkages:*

- a global community where all nations abide by their UN Charter obligations and international law and the human rights of all peoples are respected;
- a global community containing multilateral institutions that ensure that small states have an effective voice and vote;
- a strong and effective UN where states can resolve their disputes without recourse to conflict;
- a UN with access to a professional military capability, manned, equipped and trained and available for rapid and effective response in crisis situations;
- PSOs carried out under UN mandate are effective and achieve their objectives;
- an expanding global economy that is underwritten by adherence to an international open trading regime;
- effective international health and environmental institutions that control the spread of dangerous diseases and mitigate environmental change;
- a network of international/multilateral/bilateral economic linkages that supports New Zealand's economic growth and prosperity.

### DEFENCE POLICY OBJECTIVES

*To contribute to global security and peacekeeping through participation in the full range of UN and other appropriate multilateral peace support and humanitarian relief operations:*

- New Zealand will meet its UN Charter commitments to the maintenance of international peace and security. The NZDF will contribute to UN and other appropriate multilateral peace support and humanitarian relief operations. Due regard will be given to the increasing complexity and danger of these operations. The Government supports development of a permanent UN military capacity;
- Internationally, New Zealand has a long standing interest to being recognised as a *good international citizen*, committed to collective security, including PSOs, humanitarian relief operations, and international efforts to support economic development, good governance, human rights and democracy. Contributions to such efforts raise New Zealand's profile and ensure that we are playing our part as a responsible member of the international community to the benefit of New Zealand and as an example to others.

### SECURITY CIRCUMSTANCES

The key features affecting New Zealand's role globally are that:

- The **global security architecture remains fluid** with the United States remaining the world's sole superpower and a much more diverse number of lesser global players. Nevertheless, as Europe expands and reunites, it is increasingly a power of economic and diplomatic weight comparable to that of the US. It is a major player in world affairs in many areas that are of direct interest to New Zealand.
- **Globalisation** is occurring at a fast pace, creating opportunities for co-operation on a global scale. But uneven global economic development is increasingly the focal point for widespread protests about regional inequities, unresponsive international institutions, and protectionist policy advocates.
- **Modern conflicts are typically *within* rather than *between* states.** These conflicts are fuelled by ethnic, communal and religious tensions. They are compounded by structural inequities, high debt levels, rapid population growth, weak governments, environmental over-use and damage, rising crime, uncontrolled refugee migration, and arms proliferation. These conflicts continue to give rise to both **cross-border terrorism** and terrorism in targets-of-opportunity countries.

- **Intra-state disputes** create a tension between the principles of universal human rights and of respect for the territorial integrity and political independence of sovereign states. The **UN** and the international community are increasingly drawn into intra-state conflicts that pose a wider threat to international peace and security and human rights. **Intervention** in such disputes can have implications, however, for wider regional and international relations.
- Efforts to bring about the complete elimination of **weapons of mass destruction** have been only partially successful. Progress has been challenged by the South Asian nuclear tests, Israel's ambiguous nuclear programme, the continuing threat of "rogue" states and organisations acquiring nuclear weapons, and the spread of nuclear technology.
- Greater international engagement and participation in multilateral institutions faces contrary pressures from tensions, great power aspirations, conflict and insecurity in the Middle East, the Balkans, Africa, East Asia and South Asia. **PSOs** in these areas are **possible**.
- **Trans-national crime** is increasingly global in its activities in illegal trades of drugs, people and money.

#### **SECURITY EVENTS** (where involvement is in New Zealand's interests)

- Massive natural events leading to humanitarian disaster outside the Asia-Pacific region
- Cessation of conflict/changes to political environment leading to opportunity for international rebuilding of a state, where involvement is in New Zealand's interests
- Establishment of peace in long running conflicts leading to requests for international cease-fire/border assistance
- Ethnic and/or religious conflicts outside the Asia-Pacific region
- Development of weapons of mass destruction by a rogue state outside the Asia Pacific region
- Breakdown of sea lanes of communication outside the Asia-Pacific region
- Threats to or loss of access to critical resources outside the Asia-Pacific region
- **Inter-state conflict outside the Asia-Pacific region where the UN calls on the international community to mount a peace-enforcement operation<sup>6</sup>**
- Secessionist/separatist conflict outside the Asia-Pacific region where the UN calls on the international community to respond
- Global conflict
- Humanitarian disasters within a failed state where the UN calls on the international community to respond

### **Global Peace Enforcement: Combat Operations**

The Government has stated its requirement for forces to be trained for combat operations. It also requires forces to be capable of operating in Chapter VII peace enforcement operations that could involve combat.

The final scenario explores the capabilities required for commitment of New Zealand land forces as part of a large force in a peace enforcement operation. It looks at a New Zealand battalion operating within a Canadian led brigade, which takes a supporting role in the overall event. The New Zealand battalion operates alongside Canadian and Australian battalions in this scenario. Phase I does not explore the other contributions that NZDF might usefully make in such a scenario. These will be covered in Phase II, when the requirements for Naval and Air capabilities will be examined.

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<sup>6</sup> A definition of peace enforcement can be found in Box 4.

This scenario focuses on combat operations as part of a combined operation to enforce UN resolutions. This scenario is more demanding in terms of the nature and capability of land forces involved than the other two peace support scenarios and completes the requirements for land forces in PSOs.

## SUMMARY

Phase I uses these three scenarios and best practice in scenario strategic planning methodology to explore the capabilities required to meet the Government's needs in accordance with the DPF.

Figure One illustrates the spectrum of military operations. The three scenarios selected for capability development for the NZDF cover the broad range of operations as articulated in the DPF. These three scenarios are:

- use of violence by secessionist movements (Scenario A);
- splintering of a state (Scenario B); and
- inter-state conflict where the UN calls on the international community to respond (Scenario C).

**Figure One**

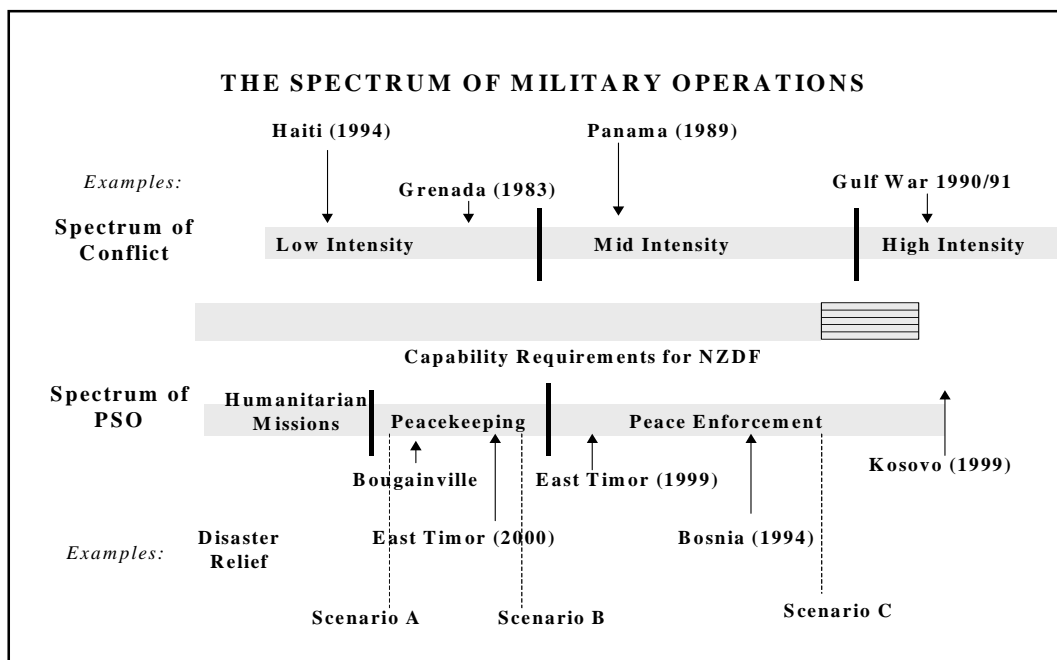


Figure One also illustrates the range of land force capability requirements for the NZDF. This range covers low-intensity conflict/humanitarian missions through to mid-intensity peace enforcement operations. Some NZDF land force capabilities can also 'stretch up' into high-intensity environments, but for limited tasking with combat force or support specialisation (i.e. medics, engineers, Special Forces). The 'barred' area contained in Figure One represents this stretch capability.

In determining the capabilities required, it is first necessary to explore the ramifications of the changes to the environment within which military forces operate. In doing so it is necessary to consider both the environment today and the likely environment forces will encounter in the near to medium term.

Although the scenarios used for Phase One are based on various intensities of PSOs, and are sufficient to define the combat capabilities required of land forces, they do not indicate the inter-relationship between land and other combat capabilities. Other scenarios being developed to support Phase Two will cover operations outside peace support, and show how land, sea and air forces are used.

### Box 3 – Levels of Warfare and Capability

**Strategic** - The strategic level is concerned with the art and science of employing national power for national policy objectives.

**Operational** - The operational level is concerned with the direction of military resources to achieve strategic objectives. It is the level at which campaigns and major operations are directed, planned and sequenced. The operational level commander, typically the joint force or joint task force commander, is responsible for the overall campaign plan and offers the crucial link between the setting of military objectives and the employment of military forces at the tactical level.

**Tactical** - The tactical level involves the direction of military resources to achieve operational objectives. The tactical level is the level at which engagements are planned, forces are deployed and battles are fought. The tactical level is primarily the concern of component commanders.

**Operational level capabilities** - Those force elements or functions that are not inherent to a self-sufficient tactical unit, but that are held at the operational level. These are frequently high value, low usage items that are pooled for use by the force on a “bid as you need” basis. At what level capabilities are held will depend on the peculiarities of any operation but those most often held at the operational level would include air defence, long range artillery, air combat force, tactical air and sea lift.

**Tactical level capabilities** - Those force elements or functions that are necessary for a tactical unit to meet its immediate tactical level responsibilities and which they will be expected to possess when they enter a combined operation.

**The concept of intensity** - Intensity describes the frequency and the degree of violence encountered in conflict, and is a measure of the rate of consumption of resources. Intensity can be high when violence occurs often or when the encounters are particularly violent. It is likely to vary during a particular conflict; for example, a conflict that is low in intensity at its outset can become high when the frequency and violence of the encounters increase. During a long conflict there may be protracted periods of relatively low intensity operations interspersed with large, high intensity engagements. Therefore, it is unhelpful to attempt to classify conflict in terms of intensity alone, and it is a concept which has more relevance at the strategic level than at the operational or tactical levels. Although high intensity conflict is likely to demand the greatest range of capability, there is no simple correlation between the intensity of conflict and the nature or scale of forces required. For example, in lower intensity operations, where vital national interests are not at stake, governments will almost certainly put a greater emphasis on minimising civilian casualties and collateral damage than they would during a war of national survival; this would have a bearing on the types of weapons systems needed.

# THE OPERATIONAL ENVIRONMENT

## INTRODUCTION

The last 10 years have seen significant changes to the nature of warfighting and peacekeeping and to the importance of peacetime support to diplomacy. This has led to a new operational environment for land forces. This section outlines these changes. It then looks at the operational environment in the context of the demands required of the land forces as set out in the DPF. This leads to a number of key operational assumptions that will need to be considered when determining the capabilities required by the New Zealand land forces to meet the Government's defence policy objectives.

## THE CHANGING NATURE OF MILITARY OPERATIONS

The nature of both warfighting (*i.e.* medium to high intensity conflict) and peacekeeping has changed significantly in the years since the end of the Cold War. Warfighting has moved its focus from set-piece battles between major powers to what NATO has termed crisis response operations<sup>7</sup>. At the same time, the international community's management of threats to global peace and security has evolved from traditional ceasefire monitoring to a broader range of PSOs, including peace enforcement. As a result, the boundaries between the two have blurred. As Figure One highlighted, there is no practical distinction between the level of threat and the capabilities required in some PSOs and in medium level conflict.

### Traditional Operations

#### Traditional Peacekeeping

The basic principles of traditional peacekeeping<sup>8</sup> were:

- **Consent** - warring parties agreed to the deployment of a peacekeeping force. These parties were able to speak for all their members;
- **Neutrality** - the UN force was there only to separate the factions. It was neither prepared nor equipped to take sides; and
- **Use of force only in self-defence** - given the consent to and the neutrality of the UN operation, the threats to personnel serving on UN operations were low and a doctrine that allowed the use of force only in cases of immediate self-defence was sufficient.

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<sup>7</sup> NATO's Strategic Concept published at the Washington summit on 24 April 1999 listed as one of its tasks "to engage actively in crisis management, including crisis response operations".

<sup>8</sup> For a definition of peacekeeping see Box 4.

## Traditional Warfighting

Prior to and immediately following the end of the Cold War, the West's armed forces were structured and prepared for high intensity warfighting between NATO and the Warsaw Pact or their proxies. Warfighting had a number of characteristics including:

- initially, it would be reactive: the western democracies would not start a war;
- it would involve an attack on, and an attempt to capture territory of another state;
- it would most likely involve the superpowers, probably on opposing sides;
- the UN Security Council would not play a part;
- conflict would involve vital national interests, where the stakes would be high;
- conflict would have high potential to escalate to nuclear war;
- conflict would be of at least medium and more likely high intensity;
- conflict would involve the massive use of concentrated force;
- while there might be little tactical warning, forces would be pre-positioned;
- conflicts tend to involve similar size forces (symmetrical); and
- duration was generally longer than current conflicts.

## Current and Future Operations

### Changes in Warfighting

There have been changes in the strategic environment. The world no longer lives in the shadow of world war. The current relationships between the major powers are good, and major conflict is not anticipated in the near to medium term. The role of international diplomacy is to maintain and reinforce this improved strategic environment. Nevertheless, today's security environment is neither benign, nor is warfighting dead. But its nature has changed. Some of the trends associated with conflict today include:

- None of the major powers are threatened by invasion. The invasion of one sovereign country by another is unlikely (although still possible, for example the 1990 Iraqi invasion of Kuwait), and even less likely to involve vital national interests for major powers.
- The Cold War suppressed underlying regional tensions and problems. Its end has been coupled with a rise in conflicts and humanitarian crises within states. These internal crises have a tendency to spill over borders and they are increasingly attracting world attention. Borders established by colonial powers are now being redefined in some cases.
- Improved international co-operation following the end of the Cold War has removed some barriers to active UN involvement. This has made possible concerted international responses (although with mixed success) to intra-state and any inter-state conflicts. Media coverage has created domestic political demand for such responses on moral and humanitarian grounds.

**Box 4 – Range of PSOs**

**Conflict Prevention** involves diplomatic action and the preventative deployment of forces in order to prevent disputes from escalating into conflicts or spreading. These actions may include fact-finding missions, consultation, warnings, inspections and monitoring, military to military engagement and confidence building measures.

**Peacemaking** includes diplomatic actions intended to manage or resolve the conflict or to at least bring the parties to agreement, for example goodwill and fact-finding missions, the deployment of Special Envoys in a facilitatory role, the provision of good offices, mediation, conciliation, diplomatic pressure or sanctions.

**Peacekeeping** is the employment of an impartial military or international civilian coalition, with the consent of all parties, to monitor and facilitate the implementation of a peace agreement and to prevent a reversion into conflict. These operations could be mandated under Chapter VI of the UN Charter. Increasingly, a humanitarian aspect to peacekeeping has developed, as peacekeepers have been required to ensure civilian access to humanitarian aid.

**Peace Enforcement** is the coercive use of military or civilian forces to maintain or restore international peace and security when the parties have not consented to intervention, but a threat to peace, or a breach of the peace or an act of aggression, has been determined. These operations could be mandated under Chapter VII of the UN Charter. They may, however, be undertaken without a UN mandate by coalitions of the willing. The key difference between peace enforcement and peacekeeping is the level of consent given by the belligerents. This means that to enforce the operation's mandate or to uphold the principles of the UN Charter, peace enforcement personnel may need to use force and/or be exposed to combat-like situations.

**Peace Building** is a term of more recent origin that defines activities “to reassemble the foundations of peace and provide the tools for building on those foundations something that is more than just the absence of war.”<sup>9</sup> Peace building concerns actions which support political, economic, social and military efforts, aiming to strengthen political settlements in order to redress the causes of conflict. Peace-building is distinguishable from development. While the two activities may overlap, peace building involves the mending of human relations and the creation of a secure and stable environment which is conducive to better relations. Peace building, therefore, involves facilitating the transition from military conflict to normalisation and elected government. This may include assistance with demining programmes.

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<sup>9</sup> Brahimi Report, p3.

- These responses have not always had the consent of the protagonists. There has thus been a move from operations conducted in terms of Chapter VI of the UN Charter (‘peaceful settlement of the dispute’) to Chapter VII (‘action by land, sea or air forces...to maintain or restore international peace and security’)<sup>10</sup>.
- As this action will often be mandated by the UN, or justified by the UN charter, it will be described as peace enforcement<sup>11</sup> rather than warfighting.
- It could be argued that, in the current strategic environment, the international community will not fight wars, it will conduct PSOs, including peace enforcement.
- While such peace enforcement operations may not be termed warfighting, they may involve medium or high intensity conflict. The doctrine and concepts used will be based on warfighting but they will be conducted within a different frame of reference.

### Current and Future Peacekeeping<sup>12</sup>

*“You can do a lot with diplomacy but, of course, you can do a lot more with diplomacy backed with firmness and force”.*<sup>13</sup>

The environment in which UN operations are conducted is increasingly different from that envisaged even 10 years ago. Operations have involved deploying into volatile, high-risk, intra-state and uncertain environments in which widespread humanitarian disaster might be the cause or consequence of conflict. As the Brahimi report<sup>14</sup> has outlined, UN operations are now not only deploying into post-conflict situations but also trying to create them. Peacekeeping has become part of a broader spectrum of operations the UN may wish to undertake in support of peace. These are known collectively as PSOs.

PSOs are most often conducted with the endorsement of the UN. They usually encompass a variety of military, diplomatic and humanitarian instruments which assist both intra-and inter-state peace processes. It is possible to distinguish between different elements of PSO, and these are outlined in Box 2, but to draw too clear a distinction between them is wrong. The experience of recent years shows that they often overlap. Forces deployed on one type of operation have to be prepared for it to change quickly into another. There is unlikely to be sufficient warning for forces to be extracted before the threat level changes; indeed, any change is likely to lead to increased pressure for those forces to stay. The principles that were associated with traditional peacekeeping may not apply to modern-day PSOs. Instead, the following principles are likely to prevail.

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<sup>10</sup> Charter of the UN, 1945. See chapter VI, Article 38 and Chapter VII, article 42.

<sup>11</sup> For a definition of peace enforcement see Box 4.

<sup>12</sup> Much of the following builds on the paper “The Changing Nature of Peacekeeping – Observations for New Zealand Defence Policy” New Zealand Ministry of Defence, 15 March 2000.

<sup>13</sup> UN Secretary General Kofi Annan made this remark in the context of Iraq in 1998.

<sup>14</sup> The Report of the Panel on UN Peace Operations published in August 2000 has come to be known as the Brahimi report after its chairman, the former Algerian Foreign Minister, Lakhdar Brahimi.

- **Nurturing Consent** - In all operations, working towards universal consent must be a key objective if a lasting peace is to be established. But consent can no longer be assumed. In a peace enforcement operation it will not exist by definition. In other scenarios there may be consent at the national or party level, but there may also be renegade local groups who disagree with their leaders and who violently oppose the PSO. Actions against these groups must be carefully judged: the need to promote consent will often constrain the use of force. **In this uncertain threat environment it is important that peace support forces have the capability to protect themselves.**
- **Neutrality to principled impartiality** – The UN is moving from a neutral to an impartial stance. There is a key distinction between the two. Neutrality suggests observation and passivity: treating both parties identically, which can amount to a policy of appeasement. In some cases local parties consist not of moral equals but of obvious aggressors and victims. Impartiality means adherence to the principles enshrined in the UN Charter or the operation's mandate. However impartial, any action (or inaction) is likely to be seen as favouring one party over the other, threatening the belief in the operation's impartiality and thus consent. Therefore, all accusations of bias must be rebutted strongly, as part of a robust information strategy.
- **The use of force** – The implication and reality of the move to principled impartiality is that UN forces are now authorised to use force in support of the principles enshrined in the UN Charter or the operation's mandate. This is likely to be part of future operations' mandates. But there is also now a presumption of authorisation of the use of force to stop violence against civilians, where UN forces may be morally compelled to, as well as operationally justified in, using force. **With this responsibility, it is important that the peace support forces have the capability, where necessary, to enforce the mandate.**
- **Legitimacy** – Support to diplomacy and peace enforcement operations may not have the sanction of the UN Security Council. Some countries are reluctant to compromise principles of non-interference in the affairs of sovereign countries, even when humanitarian circumstances suggest that this is needed. As a result, while UN Security Council authorisation is desirable and should always be sought, some operations may be undertaken by coalitions of the willing in support of the purposes and principles of the UN Charter but without the explicit sanction of the UN Security Council.

#### Credibility in PSOs

**Given the shift in peacekeeping principles, and the likelihood for the need to enforce mandates, defence forces need to be trained and equipped for combat level.** The warring parties must believe that the international community's commitment to the operation is such that it will be prepared to use military means as well as diplomatic. They must believe that the international coalition will stay intact and will employ their forces if the mandate or the principles of the UN Charter are violated. They must also believe that conflict with UN forces would not succeed.

Thus, peace enforcers must ready themselves for combat, mainly for the purpose of not having to engage in it. Rather than being focussed on the traditional concentration of decisive force, their aim is the presence of decisive force. This has now also been recognised by the UN as an important principle:

*“When the UN ... sends its forces to uphold the peace, they must be prepared to defeat the lingering forces of war and violence, with the ability and determination to defeat them. It means bigger forces, better equipped and more costly but able to be a credible deterrent threat, in contrast to the symbolic and non-threatening presence that characterizes traditional peacekeeping”.*<sup>15</sup>

## **Defence Diplomacy**

New Zealand must be able to respond to relevant crises and conflict when they occur. But the best crisis is the one that never happens. Prevention is clearly far preferable for those who would otherwise suffer the consequences of conflict, and is a less costly option for the international community than military action, emergency humanitarian relief or reconstruction after a war has run its course. In this context there is an important role for armed forces in providing support to peacetime diplomacy and development, as part of the comprehensive approach to security. This role can be called Defence Diplomacy.<sup>16</sup>

Defence Diplomacy encompasses all the varied activities undertaken by the NZDF to promote peace and security through constructive engagement and confidence building. Its aim is to dispel hostility, build and maintain trust, and assist in the development of democratically accountable armed forces, thereby making a significant contribution to conflict prevention and resolution.

In short, the aim of Defence Diplomacy is to disarm the mind. It involves bilateral and multilateral activities, constructive involvement in regional multilateral fora and support for the UN.

In terms of the NZDF, bilateral activities range from close co-operation with Australia to the work of Defence Attaches particularly in smaller countries in the South Pacific.<sup>17</sup> Bilateral activities also include the provision of training and assistance to their armed forces under the Mutual Assistance Programme, to bilateral exercises, training and exchanges with countries in South East Asia and beyond. It also includes support to other government departments, in pursuit of Government objectives overseas. For example, support to the overseas development aid programme is given through transport and the provision of specialist expertise.

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<sup>15</sup> Brahimi Report, p9.

<sup>16</sup> The term ‘Defence Diplomacy’ was coined in the UK’s 1998 Strategic Defence Review. But recognition of the increased importance of using armed forces in this capacity is widespread. For example, the Australian Chief of the Defence Force, Admiral Barrie has talked of the Australian Defence Force’s dual role: to “actively work for peace as well as prepare for war”.

<sup>17</sup> New Zealand currently has Defence Attaches based in: Australia, Canada, China, Fiji, Indonesia, Malaysia, Pacific (based in Wellington), Papua New Guinea, Philippines, Republic of Korea, Singapore, Thailand, UK and USA.

Constructive involvement in regional multi-lateral fora including the ASEAN Regional Forum, Pacific Forum and FPDA helps to build confidence and security. The ASEAN Regional Forum and Pacific Forum can be used to address issues such as arms control and proliferation. New Zealand's small size, geographic isolation, and image of neutrality, in particular among South Pacific and South East Asian nations means that it is able to take an active role in leading dialogue, for example concerning Bougainville.

There is also much that can be done with and through the UN. New Zealand has a long history of support to the UN, and NZDF personnel are currently deployed on eight UN operations<sup>18</sup>. United Nations Transitional Authority East Timor (UNTAET) has demonstrated New Zealand's willingness to make a substantial contribution to UN operations, where appropriate. As well as contributing to UN operations, the NZDF must work closely with other Government Departments to help the UN strengthen its peace operations capability.

### The Operational Environment

In this new operational environment, where the boundaries between warfighting and peacekeeping have blurred, a number of themes can be observed. These have implications for the types of operation in which the NZDF might be employed and the capabilities they will need to operate successfully. They are outlined below.

- **The 'enemy'** - The 'enemy' may be either a standing army structured for war, be a non-state actor, terrorists or militia, or a mix of both. Any militia is likely to be drawn from the local population, who might tacitly or openly support the militia. They may not be wearing a uniform and they may include women and children. They might feel they have nothing to lose and everything to gain by sustaining conflict. There may also be more than one 'enemy'. Peace support forces may deploy into operations where there are more than two protagonists (as in Bosnia). Each protagonist may not operate under a unified and institutionalised command and control system. This may mean that agreements with commanders are not be implemented on the ground.
- **Winning "hearts and minds"** - The protagonists' commitment to their cause is often absolute. This compensates for the military advantages the international community might enjoy and makes victory very hard to achieve: one conception of a conflict resolved, and the foundations of peace established, will be another concept of a conflict lost. In that situation the international community will have won the military battle but lost the political war: the objective is not to defeat an 'enemy' but to change their behaviour and mindset. This places a high premium on interaction with the protagonists and the local population more generally as a means of shaping the environment. NZDF personnel have a good reputation in this increasingly important area. **To make this interaction more effective it is important to provide a structure for developing these skills with a particular focus on providing NZDF personnel with language skills, a cultural understanding of the people and their customs, a political understanding of the background to the conflict and negotiating and influencing skills.**
- **Combined Operations** - In most scenarios New Zealand will be working as part of a grouping of countries, in an integrated military structure, often alongside Australia. The

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<sup>18</sup> The eight UN operations are UNTAET (East Timor), UNTSO (Middle East), UNAMSIL (Sierra Leone), UNMOP (Croatia), CMAC (Cambodia), UXOL (Laos), MADP (Mozambique) and UNMIK (Kosovo). NZDF personnel are also deployed on a number of operations that are supported by UN Security Council Resolutions or statements.

higher the threat, the more likely it is that New Zealand will be working with other countries. **New Zealand's contribution should be self-sufficient at the tactical level.** The tactical unit will be complemented by operational level supporting, protecting and offensive capabilities. New Zealand has two choices regarding the extent to which it contributes these operational level capabilities. First, whether it maintains or acquires these capabilities. Second, if it does have them, whether it uses them in specific operations. The ability and willingness of the lead and other nations to contribute these capabilities will be a factor in the Government's decision. The scale of New Zealand's contribution will affect its influence on the operation and the overarching political process, potentially on the success of the operation, and more broadly on the international perception of New Zealand.

- **Joint Operations** - There are no longer separate if related environments of land, sea and air, but a single 'operational environment'<sup>19</sup>, which encompasses these three elements and adds to it the information or cyber dimension. In operations where New Zealand is a key player it is likely to deploy joint forces composed of units from individual Services. In other operations New Zealand's contribution may be only from one Service, but that unit will still need to work in a joint environment. **The assumption that the NZDF will be working in a joint environment must be fundamental to all planning, training and doctrine.** Single-Service skills and ethos will remain the essential foundation of this joint capability.
- **Interoperability** - The technological gap that is opening between the US and the rest of the world is matched by the gap opening between the next tier of nations and smaller countries such as New Zealand. This is not in itself a problem. The requirement is not for parity, just interoperability. **Interoperability does not mean that equipment has to be the same.** The base requirement is that forces working complete tasks efficiently and safely together.

This means interoperable command, control and communication capabilities and 'Identification Friend and Foe' systems, and training together as often as possible. This training should help lead to common or compatible doctrine, procedures and standards. The interoperability issue is not just about the small nations keeping up with the big nations. It is also about small nations being able to work with each other. **It is important that New Zealand has a strategy for, and a programme of, regular combined exercises and exchanges with Australia and other the forces with which it is likely to operate.**

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<sup>19</sup> Operational environment can be defined as all aspects of air, surface, sub-surface, land, space and the electromagnetic spectrum that encompass the area of operations.

- **Rapid Deployment** - The Brahimi report has noted that “the first 6 to 12 weeks following a ceasefire or peace accord are often the most critical ones for establishing both a stable peace and the credibility of a new operation. Opportunities lost during that period are hard to regain.”<sup>20</sup> This is equally true of other operations. Armed forces around the world are placing increasing emphasis on the capability to move their forces rapidly to a crisis. **This has three implications for the military. There is a need for: strategic lift capability, both by air and sea, to deploy forces to the crisis; equipment to be light and require minimal logistic support, so that it is easily deployable; and for forces that are at a level of readiness comparable to those countries with which New Zealand might deploy.**
- **Asymmetric threats** – Opposition may consist of small, diverse and irregular forces, with limited access to weapons. Recognising their own military inferiority, they will attempt to engage the international community’s weak spots. These weak spots might be geographical (behind coalition lines, or outside the immediate theatre, the need to deploy to theatre through air or sea ports); psychological (public aversion to casualties, the importance of the domestic support and thus the media); unity (the strength of any coalition of the willing); defence against chemical or biological weapons (in theatre or at home); or technical (coalition reliance on information systems).
- **Weapon technology and proliferation** - There are a number of challenges related to weapons, technology and their proliferation.
  - There is a risk that chemical and biological weapons could be used either in the theatre or, through terrorist action, directly against contributing nations;
  - There is a proliferation of small arms and other weaponry. This can be particularly destabilising in countries, such as many in the South Pacific, where the security forces are armed only with light equipment. Anti-personnel land mines are also a danger in a number of areas. The proliferation can increase the threat level into which the NZDF might deploy, resulting in a disproportionate increase in the capability required to maintain force protection in such circumstances. It can also be an important political consideration when deciding whether and to what extent, New Zealand should be part of a mission; and
  - Military capability is increasingly dependent on information technology. As this technology is often developed for the civilian sector, it is thus available (often very cheaply) to any potential opponent. This does not mean that opponents will be able to acquire the same level of technology. But it does increase the chances of the opponent being able to find a way to defeat technology.
- **The Role of Mass Media** - The media’s role is fundamental. Their coverage of international events can often lead to public pressure for ‘something to be done’ and ultimately to military involvement. Thereafter, the public information campaign, as much as any other facet of the campaign, must be won. Domestic and international support for any operation must be retained. It also provides an opportunity to get key messages over to the opposing force’s commanders and their people. In an operational environment where the end goals are political and often involve changing people’s behaviour (partly through winning ‘hearts and minds’), a sound public information strategy is essential.

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<sup>20</sup> Brahimi Report, p xi.

This is not purely of relevance to politicians and operational commanders. **The basics of dealing with the media should be a core training requirement for the NZDF.**

- **Refugees and Non-Governmental Organisations (NGOs)** - Areas of conflict or PSOs generally also see humanitarian disasters and human rights abuses. These will often be accompanied by massive flows of refugees. Images of these refugees may even be the humanitarian justification for intervention. Militaries must be prepared to deal with these refugee flows. As a result of any humanitarian disaster, NGOs will almost certainly be present. Such agencies are now being brought into the process of developing doctrine, to encourage mutual understanding and a sensible division of responsibility. Defence forces need to have the skills and resources for working with them, as, in theatre, co-operation with (and in some cases protection of) NGOs will remain an important, if time-consuming, task. **For the NZDF, this task could be facilitated by putting emphasis on, and training about, NGOs and looking at the possibility of secondments to NGOs being undertaken by NZDF personnel.**
- **The Political War** - PSOs are political operations. This is because the desired endstate is increasingly subtle and impossible to define in purely military terms. It is also because the omnipresence of the media gives every military activity a political dimension: more and more tactical situations now have strategic implications. This raises two issues:
  - **Rules of Engagement (ROEs)** have traditionally represented political control at the tactical level during operations. ROEs, in general terms, tell military personnel, down to the individual soldier, in what circumstances he or she may use force. It is increasingly difficult but of vital importance to have simple and clear ROEs. **Military commanders at all levels will have to use their judgement, as well as ROEs, in very difficult situations. This will require a broad political and cultural understanding of the situations into which they are deploying.**
  - **Politicians**, given the circumstances outlined above, and improvements in communication, can and will often be involved in decisions at all levels during an operation. **This requires strategic awareness at a much lower level of command in the NZDF than in the past.**
- **Non-lethal weapons** - Non-lethal weapons have a role in operations where the imperative is to use the minimum necessary force, where the creation of martyrs is counter-productive or where the aim is not to kill but to pacify. They are particularly useful when it is difficult, until too late, to distinguish between a threat and a member of the local population. **Given the types of PSOs the NZDF will be involved in, non-lethal weapons must be considered as a capability for development.**
- **Physical environment issues** – Environmental effects may impact on forces in different ways. Examples are the legacy of unexploded munitions, physical effect of chemicals or prophylactic treatments, or the psychological effect of post-conflict stress and trauma.

- **Third world participation** - In any operation where the international community is engaged it is likely that the armed forces of Third World countries will be participating.

This is important. They can often provide useful presence, their involvement demonstrates the breadth of international consensus and they may bring a perspective and empathy to a particular mission that enables them to be more easily accepted by the local parties. But it can bring with it a number of challenges. The level of competence, motivation and utility of the contingents cannot be guaranteed, in particular if countries see participation in UN operations primarily as a source of revenue. Lower levels of capability may mean that other elements of the force must provide them with tactical force protection. It can also become part of the problem if, as has been seen in Sierra Leone, an element of the force surrenders to the militia, providing them with both hostages and equipment. Even within other operations in East Timor, the operational and administrative burden placed on major contributing countries by those nations simple 'turning up' has been large. **The NZDF needs, therefore, to be flexible and adaptable so that it is able to work alongside such forces. This could affect the capabilities it brings to a mission, for example, its support capability. It needs also to be able to take account of risks such as a different interpretation of the rules of engagement by the NZDF and the other forces.**

- **Long Term Commitment** - The nature of the conflicts into which PSOs often deploy means that peace-support personnel are likely to be required for a lengthy period. There is always pressure for a quick resolution to be found. But this seldom happens. The cessation of hostilities and the restoration of peace and order, even if successful, have to be buttressed by peace-building measures to establish trust and confidence between the disputing parties in order to prevent the dispute from resurfacing. There will also be considerable international pressure on contributing nations to continue their commitment. This raises issues of cost and sustainability both for the UN and for individual nations. As New Zealand is seeing in East Timor, **rotating troops for long term commitments can be very hard to sustain.** It also increases the likelihood of New Zealand being unable to meet another priority task because its forces are committed to an operation.
- **Casualties and Political Risk** - Since the Vietnam War, there has been a reluctance to commit large numbers of soldiers to land operations because of the risk of casualties. This has been reinforced by the US experience in Somalia and the public reaction that followed. The public seem unwilling to accept casualties in operations where there is no vital national interest at stake; some also believe that the precision capabilities demonstrated in the Gulf War and Kosovo mean that casualties are avoidable, certainly those of peace support personnel and civilians. These perceptions mean that there is a much increased political risk of involvement in any operation, and, for the military, a much greater emphasis on force protection, shaping the environment, and minimisation of collateral casualties. Land forces, with their substantial footprint on disputed territory, are particularly vulnerable.

## **Assumptions For The Employment Of The New Zealand Land Force**

Several assumptions can be made given the new operational environment in which the land forces must operate. These assumptions need to be addressed when considering the capability requirements of the New Zealand land force in order to meet the Government's defence policy objectives. These assumptions also need to be set alongside the principles outlined in the DPF for guiding and rebuilding the NZDF<sup>21</sup>. The principles are that the NZDF should be:

- equipped and trained for combat and peacekeeping;
- deployable;
- able to operate alongside other forces;
- held at appropriate levels of readiness;
- sustainable;
- up to date in technology and doctrine; and
- fiscally sustainable.

In addition to these principles, the following assumptions must be taken into consideration.

### **Most deployments by the NZDF will be based on joint and combined operations**

The NZDF cannot achieve, nor is it expected to undertake, operational missions or tasks by itself, beyond those in New Zealand and the South Pacific that call for independent action. The NZDF must, therefore, be structured for, and plan on being part of, combined operations.

The emphasis is on working collaboratively with like-minded partners, especially Australia. New Zealand's membership of the FPDA is a signal of its commitment to playing an appropriate role in maintaining regional security.

There is a growing acceptance that defence forces must be based around joint operations. The three Services remain as 'basic building blocks' for the professional skills of their specialist Service, but the focus is on the synergistic strategic, operational and tactical relationships that they have together as well as that with other agencies. This implies that the doctrine that underpins the use of land forces must also be joint in nature.

The principle of joint land operations implies that the capability plans will not just cover Army elements, but the full spectrum of all force elements within the 'area of operations'. This would include a range of capabilities such as tactical airlift, utility helicopters, naval support and naval combat, and close air support and interdiction. It is likely that a New Zealand contribution to a combined operation would involve more than one Service.

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<sup>21</sup> DPF pp12-13.

**Box 5 – Units of an Army**

**Company** - A group of 100-150 infantry soldiers commanded by a major. A company normally consist of 3 –5 platoons, a small headquarters and a small logistic organisation. For some very small-scale operations it may be appropriate to deploy a company group, which would be a company reinforced with those capabilities necessary to allow it to operate independently.

**Battalion** - A battalion consists of 3 – 6 companies (including a reconnaissance company), a headquarters and a logistic organisation, and is usually commanded by a lieutenant colonel. A battalion may have pooled combat support assets used to reinforce companies. A battalion is capable of conducting independent operations, usually as part of a larger formation. A battalion, as well as all units below it, is normally of one specialty, for example infantry, armour, artillery or logistics battalions.

**Battalion Group** - A battalion group is a (for example, infantry) battalion that has been reinforced with engineer, logistic, medical and signal capabilities so that it is able to operate for an extended period of time independently of the support a brigade would provide. Some operations may also require an artillery capability.

**Brigade** - This is normally the first level at which units of different capabilities are brought together. A brigade will comprise a headquarters, 3-5 battalions of different specialties (armoured, infantry, artillery, engineer, logistics), 3-5 separate companies (signals, reconnaissance, medical), 1-2 independent platoons (military police) and other assets such as helicopters. Brigades are commanded by a colonel or a brigadier, depending on the size and task of the formation. The brigade can be the tactical building block of a large force or may be employed for medium size operations independently.

**New Zealand must have the ability to provide to a combined operation a battalion group that is self-sufficient to perform its primary tasks**

Any NZDF land force contribution at the battalion<sup>22</sup> level will need to be able to slot into a larger multinational structure. It will need to be self-sufficient<sup>23</sup> at the tactical level, that is, it should be able to accomplish tactical tasks assigned to it without assistance and meet its responsibilities to protect itself and any others under its care. This requirement, along with the peculiar characteristics of an operation, will help to determine the appropriate level of fire support, command and control, logistics support and information, as well as the level of interoperability required.

Given the terrain in which New Zealand land forces may have to operate, the capacity to assign rotary wing lift to New Zealand forces is essential. This focus on a self-sufficient tactical unit also suggests that the NZDF land force component will be 'task-tailored', and hence will need to be modular and adaptable to integrate into a combined force. New Zealand may decide to contribute a tactical unit at a lower level than a battalion, such as a company. A company would not be logistically self-sufficient but would slot into a battalion led by another nation. Here the focus would be more on interoperability.

**Any New Zealand contribution will be dependent on a combined force's operational-level capabilities**

A New Zealand contribution of a battalion, while self-sufficient in its area of operation, will be dependent on a range of combat and non-combat capabilities. These will support the battalion's operations and provide deeper force protection. They will be held on a pooled basis at a higher operational level.

These capabilities will be provided by the participating nations. Some will be provided as composite elements, where several nations pool their own contributions to form a complete unit (such as artillery batteries into a regiment). Other capabilities or groups of capabilities may be provided by a single nation.

The dependence issue may create tensions within the coalition arrangement about burden sharing. Such tensions can be reduced through New Zealand being able to contribute a share of these capabilities. New Zealand forces will also need to be able to work with these operational-level capabilities in theatre when (because New Zealand may choose not to have them) the NZDF is unable to train with them on a national basis. This increases the requirement for exercising with other nations.

**Any contribution by New Zealand must add value to a combined operation**

New Zealand's contribution to a combined operation could come in all or any of three forms. First, as outlined above, it could be in the form of a self-sufficient tactical unit. Second, it could be a smaller dependent unit, such as a company or troop, that fits into a battalion unit. And third, it could be by providing a share of the capabilities held at a higher level. The key factor is that any contribution must add value to the operation.

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<sup>22</sup> Descriptions of the different units in the Army, including the battalion, are provided in Box 5.

<sup>23</sup> The definition of self-sufficiency and area of operations is covered in the later section on Land Force Capabilities.

New Zealand could contribute these operational-level capabilities as stand-alone units or as components of a composite multi-national capability. It is most likely to hold capabilities that also have utility for other tactical purposes, or are used in other roles supporting its interests.

When New Zealand is working within a large multinational effort, involving many and larger nations its contribution may be small. The contribution could consist of combat, specialist or non-combat elements. **In operations where Australia and New Zealand are the two key participants, however, New Zealand will be expected to share the load of providing operational level support.** This is particularly relevant as Australia itself has limited capacity to assume significant tasking on behalf of others.

**There will be an increased focus on using the NZDF in defence diplomacy – shaping the regional environment to help prevent conflict**

Defence diplomacy is not a new idea. The NZDF has a proud record of providing support to peacetime diplomacy, as well as contributing to PSOs. New Zealand's image of impartiality means that it is trusted by nations around the world but particularly in the South Pacific and South East Asia. NZDF personnel are also widely recognised for their ability to relate easily to those they have to work with. But there is scope for doing more.

**There will be an increased focus by the NZDF on the skills and capabilities required to shape the operational environment**

The importance of shaping the environment is not restricted to conflict prevention. It is also a crucial role prior to, during, and after an operation. It involves situational awareness, intelligence, information operations and all efforts to change behaviour and encourage consent. Its aim is to create and maintain the conditions where the mandate can be implemented, and where the use of force will be unnecessary. This is a high-level task that should be co-ordinated by the lead nation in any operation, but it will have to be implemented at the unit level. It is, therefore, important that New Zealand plays its part. There is, accordingly, a need for a greater focus on those capabilities that will help the NZDF to shape the environment.

**New Zealand's military commitments to PSOs will be discretionary**

New Zealand has both special obligations to Pacific neighbours and specific security interests in South East Asia. This will inevitably mean that there will be strong reasons for New Zealand involvement in any PSOs in these regions. Further afield, the Government will base its regional and global engagement on active support for, and participation in, UN and appropriate multi-national PSOs<sup>24</sup>. Essentially New Zealand's involvement and the nature of the commitment are matters of choice but this means that the Government must equip the NZDF to be able to act in the situations where the Government wants to act.

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<sup>24</sup> DPF p7.

## CONCLUSION

The nature of PSOs has changed significantly over the past 20-30 years. The principles of consent, neutrality and legitimacy have been overshadowed by the realities of modern-day operations. Instead PSOs have broadened considerably with blurring across Peacemaking, Peacekeeping and Peace Enforcement. In addition, the principles underlying such PSOs have changed to include the need to nurture consent, the move to principled impartiality and legitimacy.

For the NZDF this changed environment presents new challenges. The DPF identified seven principles on which the NZDF was to be rebuilt. In addition to these, a number of operational assumptions can also be identified. These include:

- **Most deployments by the NZDF will be based on joint and combined operations;**
- **New Zealand must have the ability to provide to a combined operation a battalion group that is self-sufficient to perform its primary tasks;**
- **Any New Zealand contribution will be dependent on at least some combined forces operational-level capabilities;**
- **Any contribution by New Zealand must add value to a combined operation;**
- **There will be an increased focus on using the NZDF in defence diplomacy – shaping the regional environment to help prevent conflict;**
- **There will be an increased focus by the NZDF on the skills and capabilities required to shape the operational environment; and**
- **New Zealand's military commitments to PSOs will be discretionary.**

It is important to note that the focus on PSOs does not detract from the combat nature of military operations. Rather, it is a change in the way operations are conducted essentially demanding a great degree of flexibility and skills by commanders. As has been identified in terms of involvement in multinational peace operations,

*“The most pressing tasks for the Army are not changes in procedures, doctrine, force structure, organisation or training, but in attitudes. Army leaders at all echelons must understand peace operations. When peace operations are a valued part of the Army's function, then changes in procedures, doctrine, force structure, organisation and training will flow naturally and smoothly”<sup>25</sup>.*

These principles and assumptions will provide the framework for the development of NZDF land capability consistent with the DPF.

In the light of the above, it is now possible to discuss the development of capabilities for the NZDF.

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<sup>25</sup> Page 4, Schook, 1997.

## ASSESSMENT OF LAND FORCE CAPABILITIES

*“The soldier of the future must be able to do his military job but he must also be able to do more. He is a mediator and a diplomat and must be able to develop empathy for the parties in conflict....”*

*Rudolf Scharping, German Minister of Defence, November 2000*

### INTRODUCTION

The Government’s defence policy calls for the NZDF to make a meaningful contribution to international security with a core requirement for well-equipped, combat-trained land forces that are also able to act as effective peacekeepers. The political impact made by New Zealand depends on the quality of the NZDF effort. Its principal strength is the international recognition given to the consistently high performance of its military personnel in PSOs over a long period. Building on this strength will ensure strong political impact and support the Government’s international engagement goals.

Land forces, along with other capabilities, have high utility in PSOs. The requirement to deploy land forces to UN or multinational PSOs determines the level of capability required and the basic orientation of the force. The political impact made depends on the degree to which the contribution is useful to the UN and on the land force’s competence to achieve peace support goals. That means the land force must be equipped to participate in the expected range of UN peace operations. These will be broadly of three types: Chapter VI peacekeeping and peacemaking, and Chapter VII peace enforcement operations.

As indicated in the previous sections, the demands of PSOs are wide, ranging from low-level tasks carried out within a stable environment up to enforcement tasks requiring combat skills. A wide range of effects is also to be achieved. A range of capabilities and skills are required to meet the total responsibility assigned to the combined force. The question is, which of those *must* be provided by a New Zealand land force contribution?

In this section, the breadth of capability required for a battalion group to be self-sufficient within its area of operations is developed. This provides an opportunity to highlight areas in which capability gaps currently exist, or where current capabilities need to be enhanced. First however, it is necessary to be clear about what is meant by “self-sufficiency” and “area of operations”.

### Self-Sufficiency

Self-sufficiency refers to the ability of the battalion group to be able to undertake effectively its tactical tasks without undue dependence on the multi-national force itself. National forces committed to a combined operation will be expected to be self-sufficient to:

- conduct their primary task;
- meet immediate logistics needs;
- defend themselves from reasonable and anticipated threats within their assigned operational area; and
- operate continuously for extended periods in concert with allied forces.

## Box 6 – The Three Dimensions of an Area of Operations

### The Physical Dimension

The physical dimension of the area is the easiest construct to deal with. Essentially it describes the movement of physical elements within an area of interest. Surface and air operations or capabilities characterise the physical dimensions of an operational environment. The traditional concepts of air, sea and land environments are all interconnected by the electro-magnetic spectrum. Contemporary military operations in the physical dimension are typically non-linear in nature *i.e.* they are dispersed and opposing forces may be operating freely in the same area.

Superiority in the physical area of operations is achieved by:

- real-time information systems;
- responsive command and control systems;
- inherent tactical mobility across all environments as required;
- responsive logistical support; and
- ability to rapidly deliver lethal or non-lethal effects.

### The Intellectual Dimension

The intellectual dimension is characterised by the impact of time on the conduct of operations. Elements of time are usually manifested in the speed and clarity of the decision-making process. While time has always been a fundamental element in military operations, the contemporary area of operations requires an ability to manipulate time, to the advantage of friendly forces while simultaneously disadvantaging the opposing forces.

The focus is very much on conducting operations at a tempo that renders the adversary's actions largely irrelevant. Maintenance of superior rates of activity will result in 'temporal dislocation' of the adversary and undermine his ability to conduct operations within the physical dimension of the area of operations.

Superior tempo in the intellectual dimension is provided by:

- responsive command and control systems;
- real-time information systems; and
- superior situational awareness and analysis systems.

### The Psychological Dimension

The third dimension of the area of operations refers to the psychological dimension or the mental impact on the conduct of operations. Manipulating adversarial perceptions to achieve a psychological edge in warfighting by exacerbating fear, doubt and chaos can attain mental superiority. The achievement of a psychological edge allows exploitation of the physical and intellectual dimensions to achieve greater effects from a small force.

The psychological dimension can also be exploited to garner support from the local populace. This has the benefit of building up our situational awareness as well as helping to undermine domestic support to the adversary.

Mental superiority can be achieved by:

- responsive command and control systems;
- ability to control the adversarial electro-magnetic and cyber spectrums;
- the use of non-lethal measures to challenge public support for the adversary; and
- information operations and electronic warfare.

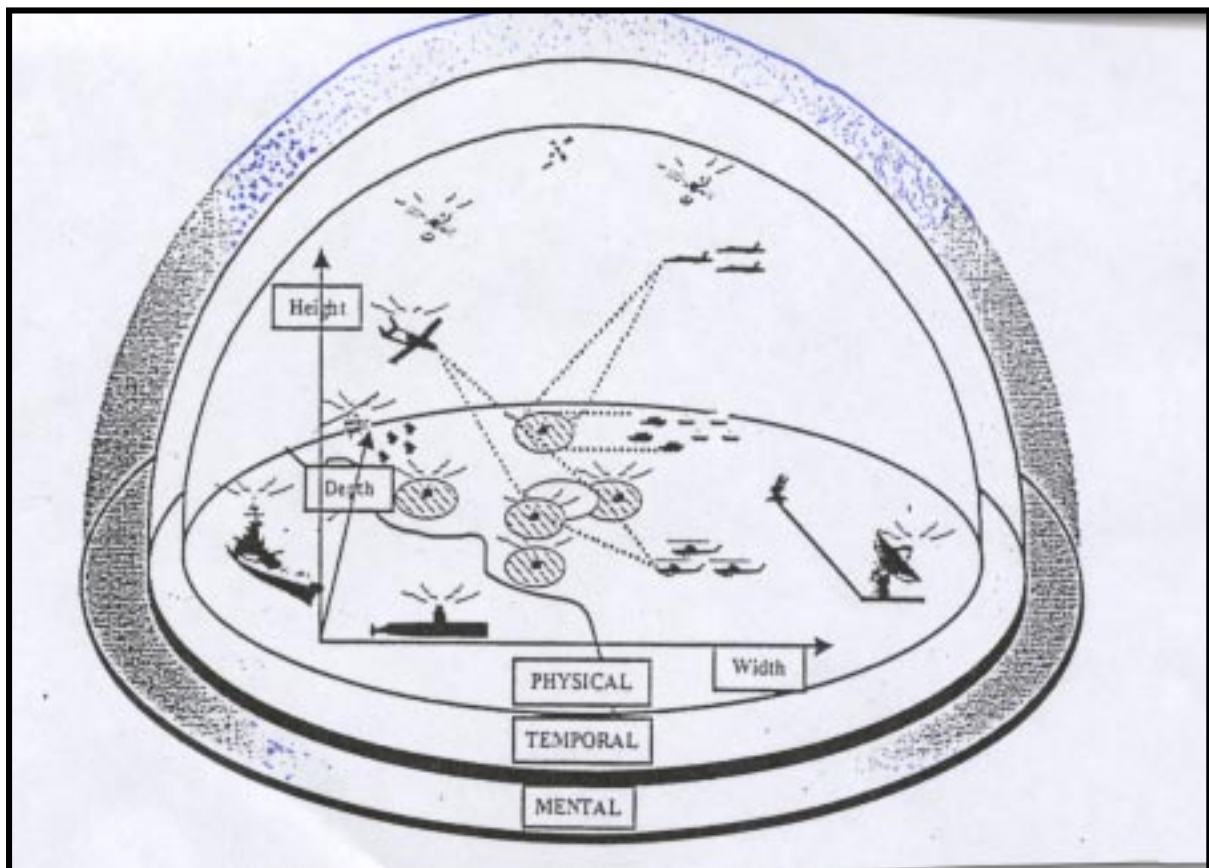
This is referred to as **self-sufficiency for the tactical task**. Beyond this, other capabilities of a high value low usage nature or that provide heavier and more concentrated support to deal with unanticipated or unusual tasks and threats, will be pooled for use in support of a number of tactical units. These capabilities will be referred to as operational level capabilities.

### Area of Operations

The area of operations refers to the area of immediate responsibility for the battalion group. The physical, intellectual and psychological dimensions can describe this area across the traditional environments of land, sea and air, together with the contemporary elements of space, the communications spectrum and information technology domain (see Box 6). Figure 2 illustrates these dimensions.

Figure 2

### Area of Operations Dimensions



The multi-dimensional area of operations is an important concept in illustrating the changing nature of conflict. This operational area goes beyond the traditional aspects of the physical environment by encapsulating the notion of both the intellectual and mental dimensions. In both the latter dimensions, the ability to defeat an adversary through superior information and decision-making ability, whilst also denying the adversary information, is an important element in resolving any hostility. Similarly, the ability to undermine the moral and psychological aspects that may underpin the adversary's efforts can play an important role in resolving tensions in both the pre-conflict and conflict stages.

The idea that a land force is responsible for a linear zone of interest is thus no longer relevant in the type of modern-day conflicts that prevail. Furthermore, the nature of contemporary PSOs requires the ability to 'tap into' and shape the information available to all players within the area of operations. In doing so, one can try to avoid hostility or, if in a hostile situation, quickly resolve the situation either through force or by influence.

In brief, today's modern area of operations is essentially characterised by the following:

- Information is gained primarily by dedicated systems and technology rather than by ad-hoc intelligence reported from the field.
- Managing security within areas is now more about what is happening within particular times and particular places rather than the blanket occupation and holding of ground.
- There are military tasks in all phases of an operation extending beyond the period of hostility. Mediation and diplomacy are as important as warfighting.
- The 'enemy' is likely to be dispersed within the area of operations rather than be an identifiable opposing force.
- smaller, organisationally flexible forces able to provide targeted effects are best at applying combat power.
- Non-lethal means of persuasion are just as important in the ability to effect operational outcomes as lethal means.

### **General Characteristics of the NZDF Land Force**

Using the scenarios to illustrate how NZDF land forces will be employed within a multinational force, it is possible to identify some general characteristics of the land forces that would meet government policy requirements. These characteristics include type of contribution, orientation of the force and size of the force.

### **How Much is Enough?**

For New Zealand to make an impact within a multinational force, and to obtain some influence within the PSO, it must commit a force large enough to stand alone as a recognisable national contribution. It should also be able to be given responsibility for an area of operations and set of tasks in its own right. A battalion is the smallest, internationally recognised, independently tasked unit. Anything smaller would be placed under the command of another nation's battalion. National visibility and influence would, therefore, be lost.

Impact does not, however, depend solely on the size of contribution. For many years New Zealand has contributed small numbers of observers and specialists such as de-mining personnel to a wide range of UN missions. Both New Zealand's willingness to be involved to the extent it has been, and the professional capability of the personnel involved, have made a considerable impact on the UN. It has enhanced New Zealand's standing as a reliable and effective contributor.

Chapter VII PSOs require combat capabilities to deal with challenges to UN-imposed conditions for restoration of peace. The UN requires forces employed on Chapter VII operations to have the capability to defend themselves, and any other element for which they might be responsible, and be credible in their resolve to enforce UN requirements.

The military skills developed for combat operations encompass all those needed to carry out similar military tasks in a non-combat environment. Awareness and skills training in political issues and civil/military interaction within the peace support environment supplement these.

PSOs will almost inevitably see New Zealand forces committed to a multinational force. Such operations usually require rapid intervention of forces to stabilise the peace environment. The most useful forces are those that can arrive early and be immediately effective.

Therefore, to fulfil key policy requirements of achieving maximum political impact and being combat capable within peace enforcement operations, the land forces must be of a type, size, capability, and level of competence to be highly valued. They must be readily deployable and quickly effective, and be available with few restrictions on employment. They must be sustainable for the period for which they are required, able to protect themselves, and they should be self-sufficient to carry out their assigned tasks. This is to avoid placing unnecessary demands for support on other nations already providing operational level supporting capabilities to tactical units such as a New Zealand battalion.

### **Orientation or Type of Force**

Heavy and mechanised forces are inappropriate for New Zealand. They are expensive to acquire and maintain, difficult to deploy, and oriented towards high intensity combat. The operations envisaged under the Defence Policy Framework suggest light infantry forces, together with immediate support capabilities, are appropriate. Such a force orientation will match the political and combat demands of peace support, is flexible in terms of the physical environments in which they can be used, is less expensive to develop and maintain than a mechanised force and is easily deployed using other NZDF assets.

### **Size**

As indicated above, the land forces structure should be based on committing and sustaining a battalion group. This requires, as a minimum, a two-battalion structure organised within a brigade framework for training, but a deployable brigade itself is not required. The battalions should consist of:

- Headquarters;
- three infantry companies;
- a reconnaissance company; and

## Box 7 – Definitions of a Selection of Military Capabilities

**Command and control (C2)** - The ability of the commander to know, control and co-ordinate what is happening, to plan and decide what to do and to communicate orders to subordinates and receive orders from superiors. It allows the commander to manage resources efficiently. Another commonly used phrase is C4I: command, control, communications, computers and intelligence. These encompass the tools and systems which allow command and control to be exercised.

**Manoeuvre** - Employment of forces through physical movement in combination with fire or fire potential as well as superior decision making to achieve a position of advantage in respect to the enemy in order to accomplish the mission. (ADF) Tactically it is very similar to mobility, but more generally it is an approach to the use of armed forces that seeks to defeat the enemy by shattering its morale and physical cohesion – its ability to fight as an effective, co-ordinated whole, rather than by destroying him physically by incremental attrition. (UK)

**Mobility** - A quality of capability of military forces which permits them to move from place to place while retaining the ability to fulfil their primary mission. (ADF)

**Reconnaissance** - A mission undertaken to obtain by visual observation or other detection methods, information about the activities and resources of an enemy or potential enemy; or to secure data concerning the meteorological, hydrographic or geographic characteristics of a particular area. (ADF)

**Logistics** - The science of planning and carrying out the movement and maintenance of forces. (ADF)

**Surveillance** - The systematic observation of aerospace, surface or subsurface areas, places, persons or things, by visual, aural, electronic, photographic or other means. (ADF)

**Intelligence** - The product resulting from the collection and processing of information concerning foreign nations, hostile or potentially hostile forces or elements, or areas of actual or potential operations. (ADF)

**Combat service support (CSS)** - The support provided to combat forces, primarily in the fields of administration and logistics. (ADF)

**Fire support** - The delivery of direct or indirect fires in support of friendly activity.

**Close fire support** - The delivery of direct or indirect fire, in close proximity to, and integrated with the fire and movement of, friendly forces.

**Situational awareness** - A clear picture of a given situation, which is the product of successfully executed reconnaissance, intelligence and surveillance combined with an understanding of the local environment and culture, the local and international political dynamics related to an operation, and the state and disposition of friendly forces. Other similar terms are situational understanding and common operating picture.

**Force protection** - Process that aims to conserve the fighting potential of the deployed force by countering the wider threat to all its elements from an adversary, natural and human hazards and fratricide. This is achieved through a combination of a defensive posture, protective armour, troop training, and sufficient firepower to present a credible deterrent. (UK)

**Information operations (IO)** –Actions taken to affect adversary information and information systems while defending one's own information and information systems. (DOD)

**Electronic warfare (EW)** - The military action involving the use of electromagnetic energy to determine, exploit, reduce or prevent hostile use of the electromagnetic spectrum and action which retains friendly use of the electromagnetic spectrum. (ADF)

- combat support elements.

With the addition of logistics, medical, engineers and signals capabilities, these form the battalion group. Artillery may form part of a battalion group for tactical support, but is usually provided at the next level of brigade.

A battalion group composed of all the elements needed to support combat or high activity operations may consist of 1200 personnel. Smaller battalions may, however, be more appropriate for lower intensity operations where smaller numbers or fewer capabilities are required.

The option of deploying company groups into low-level operations exists and may be appropriate in some circumstances.

### **Level of Interoperability**

Any New Zealand land forces contribution must be interoperable with those forces with which it is likely to combine. New Zealand military doctrine must be based on that of the major partners with which it can expect to work. The standards to which it carries out its assigned tasks must meet internationally accepted levels. This does not mean that New Zealand must possess identical equipment, nor that its equipment should have same performance as that of our partners. The effects, however, of employing New Zealand's capability must achieve the objective set, to the standards of accuracy or completeness needed. **New Zealand's focus for interoperability is Australia**, whose doctrine is based on that used by Canada, Great Britain, and the US.

### **Capability Requirements: What would be expected of the NZDF Land Force?**

Given the multi-dimensional area of operations that land forces will need to work in, it is possible to identify five broad operational effects that must be achieved:

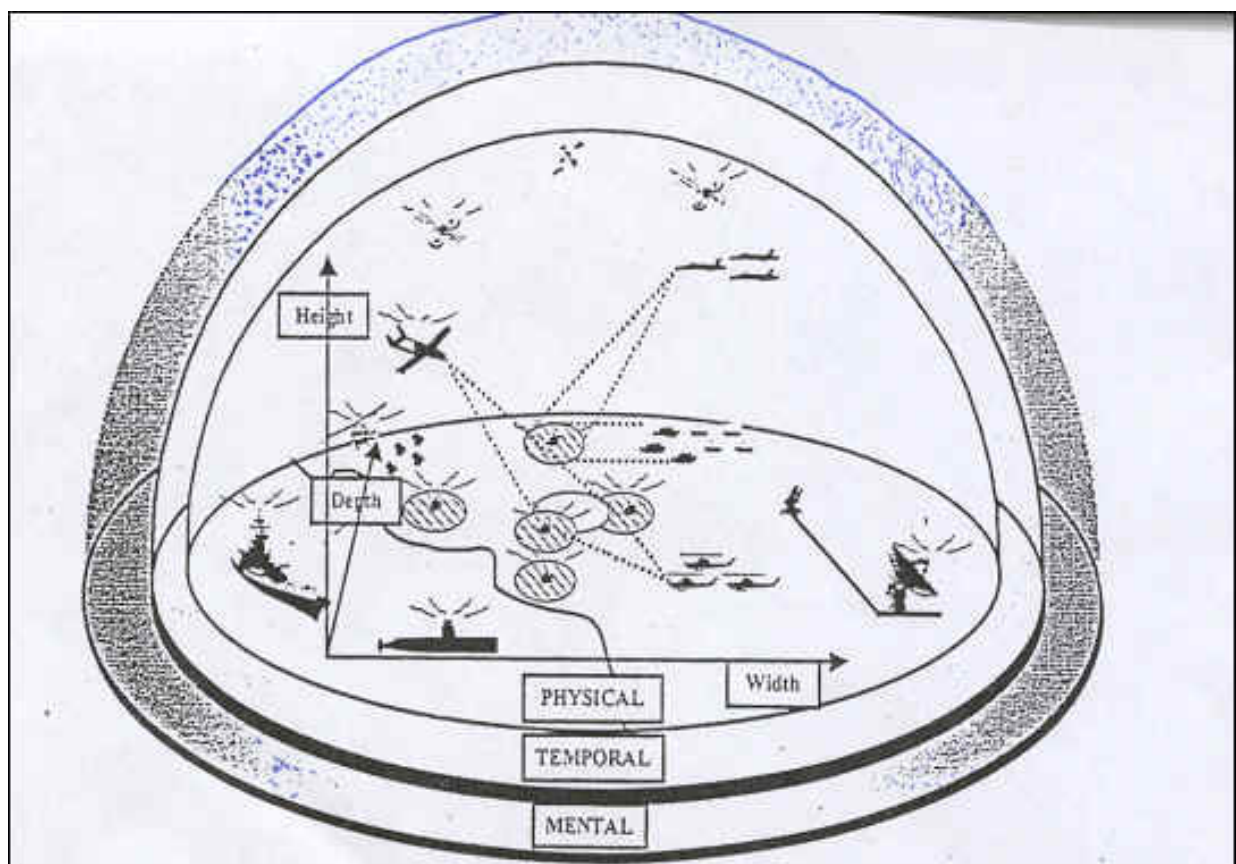
- manoeuvre;
- information management;
- enforcement;
- physical management; and
- logistics.

In total **these effects describe the capability dimensions of a self-sufficient land-force tactical unit**. The levels of capability to achieve the particular effects however, are dependent upon the nature of the physical environment, the type of threat and the multi-national arrangements.

### Box 8 – The Concept of Manoeuvre

The concept of manoeuvre requires the battalion group to operate within three concentric circles; these being the information envelope, the protective envelope and the ground occupied by the manoeuvre group (see Figure Three). The information envelope provides the time and space required for the decision cycle to run its course and then allow the manoeuvre group to react. It can vary in size as the length of the decision cycle or the enemy speed of movement vary. The protective envelope represents the direct fire capability of the land force within which enemy targets can be engaged and destroyed. The protective envelope is approximately 2500 metres for the New Zealand battalion group as this represents the range of the direct fire weapons appropriate to the conflict spectrum within which the New Zealand battalion group is likely to operate within. These envelopes move as the centre of mass of the unit (the manoeuvre group) upon which they are centre moves.

Figure Three



## Capability Requirements to Achieve the Effects

To achieve the effects outlined above, there are a variety of tasks that need to be carried out that shape the capability requirement required of land forces.<sup>26</sup> These tasks fall into a standard group and are usually carried out regardless of whether it is a combat or non-combat environment.

### MANOEUVRE

Manoeuvre refers to the ability to move within and control the three dimensions of the area of operations to gain advantage. This could be conducted within a relatively small but complex ground or more open ground which could be urban areas. In geographic terms this could encompass an area of more than 40kms radius. Road mobility through a variety of terrains and protection from small arms fire and blast from mines are minimum requirements.

#### Specific manoeuvre tasks that are relevant to the land forces include:

- positioning/repositioning forces;
- conducting movement/deployment;
- providing mobility;
- providing counter-mobility;
- conducting countermine operations; and
- gaining/maintaining control of land areas.

The achievement of manoeuvre effects covers three dimensions – Physical, Intellectual and Psychological.

**Physical manoeuvre** is conducted principally in support of tasks such as raids, ambushes, patrols, checkpoints, convoy security and humanitarian assistance (such as the protection of some NGOs).

Physical manoeuvre based on land is required throughout different terrain types, such as open, urban, jungle and swampy ground. Given the types of threat and physical environments developed under the scenarios, protected, agile land mobility is required. The proposed acquisition of the Light Armoured Vehicles (LAV) will provide the appropriate level of mobility and protection given the physical, threat and operational environments. Land mobility can also be achieved through the use of Light Operational Vehicles (LOV). The current LOV fleet is well beyond its effective life and needs replacement.

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<sup>26</sup> For definitions of a selection of military capabilities see Box 7.

The review has concluded that:

- **the purchase of the LAVs will provide mobility and firepower to protect and support the land forces;**
- **the present LOV<sup>27</sup> is no longer supportable and its immediate replacement is critical to future operations; and**
- **other combat support vehicles are still operational, and replacement can occur as they reach the end of their economic lives.**

Physical manoeuvre by airlift is required to conduct operations by day and night, under a wide range of meteorological conditions and with a sufficient payload. Capability requirements developed under each of the three scenarios suggest the critical need to use helicopters to rapidly move a 6-person fully-equipped patrol. Ideally this should be achieved in a single lift by one medium-lift helicopter. Currently, this capability requirement can be met with the use of two utility Iroquois helicopters. Helicopters also need to have limited protection against small-arms fire and shoulder-launched surface-to-air missiles. Offensive capabilities are not required given that New Zealand is not required to conduct air-borne assaults. Rather the focus is to support tactical delivery of equipment to the land forces. There is also a capability requirement for medium-lift of stores and equipment by rotary wing to support deployment.

Currently no medium-lift rotary-wing capability exists within the NZDF

This review has concluded that:

- **the present helicopter has limited troop lift and cargo capacity and this is a limitation for some operations. There is no medium-lift capability held within the NZDF. Limitations exist on the ability to lift land force equipment across the shore by helicopter. The Phase II review will determine options.**

### **Intellectual manoeuvre**

Intellectual manoeuvre refers to the capacity to have command and control capabilities, such that tempo and decision-making are maintained at a superior rate than the adversary. The ability to command, control and communicate is critical to the effective conduct of the operation. Command and control also extends integration from the tactical unit through to the operational unit and national headquarters. Specific tasks include:

- acquiring and communicating operational level information and maintenance of operational status;
- directing and leading subordinate forces;
- determining actions;
- assessing operational situation;
- commanding subordinate tactical forces;
- co-ordinating information operations within the area of operations;

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<sup>27</sup> Note: A LOV-type vehicle is required for special operations. Although this requirement relates to the separate Special Forces Review, it is likely that procurement will be linked to the LOV purchase.

- co-ordinating and integrating military and NGO effort.

The present command and control system at strategic and tactical levels is quite rudimentary and still heavily paper-based. Interface with the command and control systems of partner nations is becoming more difficult to achieve. Two levels of system are required:

- a Joint Command and Control System<sup>28</sup> that meets the needs of the national headquarters and the Joint Force Headquarters<sup>29</sup>; and
- tactical communications systems to support operations in the field.

There are also current capability deficiencies in the local area network and strategic link components of the Command and Control system.

The review has concluded that:

- **a definition study should be carried out that defines the requirement for command and control systems to ensure that:**
  - **a phased approach is taken that allows the progressive adoption of new systems and technology in a prioritised manner, again to reduce risk; and**
  - **national command requirements, interface with lead nations, and interoperability are managed cost-effectively.**

### **Psychological Manoeuvre**

In terms of psychological manoeuvre, there are currently limited capabilities held by the NZDF. Any such skills are limited to rudimentary applications of Civil-Military Affairs and cultural training prior to deployment. There is also very limited language training. Environmental shaping capabilities conducted through information operations and electronic warfare (passive and active) are likely to become increasingly important in the conduct of PSOs as developed in the scenarios. Specific tasks include:

- employing electronic-warfare in the area of operations;
- employing information operations in the area of operations; and
- conduct joint civil-military operations.

The review has concluded that:

- **A definition study needs to be conducted to identify the appropriate mix of Information Operations electronic-warfare and civil-military affairs capabilities to be held by the NZDF consistent with operational requirements.**

### **INFORMATION MANAGEMENT**

Information management in this context refers to the ability to direct, collect, process,

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<sup>28</sup> A Joint Command and Control System is an information system which enables commanders at the strategic operational and tactical levels to conduct effective exchange of information within a component, joint, combined or coalition force in order to command and control operations. The system typically includes databases, overviews of the operational picture, collaborative planning tools and may include simulation software.

<sup>29</sup> A Joint Force Headquarters for the NZDF is to be established on 1<sup>st</sup> July 2001 and will be responsible for all operations.

distribute and evaluate information for operational advantage. Information management covers two areas:

- close *i.e.* that area immediately within the protective envelope; and
- shaping *i.e.* information outside the protective envelope that is likely to influence tactical and operational tasks.

Intelligence, reconnaissance and surveillance are inputs into the situational awareness picture that underpin the conduct of manoeuvre. In particular, information is required for force protection, guidance of own force movement, and in support of tactical decision making.

Specific tasks include:

- developing intelligence requirements;
- obtaining and accessing intelligence information;
- collecting and sharing information;
- processing and exploiting collected information;
- producing operational intelligence and preparing intelligence products;
- disseminating and integrating intelligence;
- evaluating intelligence activities in the area of operations; and
- conducting joint combat assessments.

Land forces committed to PSOs are assigned responsibility for larger areas than previously. Situational awareness is, therefore, required over an extensive area. The capability must be available day and night and in poor weather. The present capability is poorly supported by technology. Reconnaissance and surveillance are carried out by troops with night vision equipment. The size of the area and demands of difficult topography mean that technology must be employed to compensate for manpower, to enhance results in poor weather. The increased speed and mobility of the infantry afforded by better vehicles, such as the LAVs, will exacerbate this deficiency.

Sensor technology is a rapidly developing area and there is a wide range of options at different costs. There is potential synergy between the requirements for land operations and capabilities related to other NZDF force elements and indeed, with those required by other government departments.

This review has concluded that:

- **a definition study should be carried out to define the requirements and determine how capabilities can best be developed to provide surveillance, reconnaissance, intelligence, to ensure that:**
  - **synergies elsewhere in the NZDF are identified;**
  - **national, operational, and tactical needs are fully understood so that critical elements are provided; and**
  - **acquisition of appropriate sensors and technology is prioritised and phased to reduce risk and manage investment levels.**

Notwithstanding the need for the scoping study to consider operational level and national capability:

- **there is a priority requirement to provide a land-based mobile reconnaissance capability in direct tactical support of infantry manoeuvre that introduces some technology to support the manual effort, and ensure its self-sufficiency.**

## **ENFORCEMENT**

Enforcement refers to the ability to apply military force as required to shape or deal with threats within the area of operations. Enforcement occurs at three levels:

- direct;
- indirect; and
- shaping (may have effects outside the area of operations).

The provision of firepower includes not only the lethal targeting and firing but also the use of non-lethal means. Specific tasks include:

- processing targets; and
- attacking targets within the area of operations through:
  - providing close air support integration;
  - conducting attack on targets using non-lethal means;
  - providing firepower in support of operational manoeuvre; and
  - synchronising operational firepower.

## **Fire Support**

For this capability there are two requirements. The first is for close support weapons that provide self-protection for infantry and supporting forces. The second is for longer range indirect fire weapons that can provide screening, deter approach or deal with an approaching threat.

The three quality dimensions to this capability are:

**Accuracy** - If weapons are to be employed in a PSO, the rules of engagement stress the importance of accuracy, to reduce the risk of collateral damage.

**Range** - Self-evidently, the range of own weapons must at least equal that of expected opponents. The range of quite unsophisticated weapons in use in the region is increasing, in particular as it is not fettered by a need for accuracy.

**Effect** - The weapon employed must create the right effect to ensure success against a range of targets under different conditions and minimise collateral damage. One significant effect is that they should deter others from engaging New Zealand forces: this is the best form of protection. The target may range from opposition light weapons to an armoured vehicle.

The present close support capability has insufficient range to match weapons likely to be used by even unsophisticated renegades or militia. Procurement of replacement weapons had begun, but the following projects are on hold pending completion of this review:

- sights for the 12.7mm Machine Gun direct fire support weapon recently purchased;
- the automatic grenade launcher which requires the same sights for the 12.7mm Machine Gun - thus the two projects are linked; and
- the medium range anti-armour weapon.

This review has concluded that:

- **all three weapons are consistent with the direct fire support requirements in the scenarios developed;**
- **priority should be given to acquiring the automatic grenade launcher and the sights for both weapons to provide the range and all-weather capability required. Until the sights are purchased the machine gun will have limited utility;**
- **the requirement for the anti armour weapon should be prioritised within the wider land force requirement to be detailed in the NZDF capability blueprint noting that absence of a longer range weapon may limit deployment to areas with no armoured threat;**
- **the current longer-range indirect fire support weapons have some limitations in accuracy and range but are still presently suitable for use. Long-range fire support is customarily an operational level function and a range of options may be available within the multinational force; and**
- **a definition study should be carried out to determine the fire support requirement to ensure that:**
  - **an appropriate balance is struck between capability required to meet essential tactical self-sufficiency requirements and capability which has utility for tasks that may be the responsibility of operational level forces (noting that New Zealand itself is a member of the theatre combined force and may be asked to contribute); and**
  - **an appropriate mix of weapon types is selected that provides a cost-effective level of capability noting that long range fire support may also be provided by NZDF air and naval assets.**

## **PHYSICAL MANAGEMENT**

Physical management refers to the ability to control the physical environment for offensive and defensive purposes. Specifically this includes the ability to plan manoeuvre routes, deal with obstacles, and construct defensive works. There are two major groups of tasks in this capability effect – mobility support and force protection.

## Mobility Support

The first set of tasks cover a range of engineer capabilities such as the ability to plan and construct safe routes for manoeuvre forces, deal with obstacles, and construct defensive works. Present engineering capabilities are quite basic and an upgrade of some is required. Specific tasks include:

- offensive management/counter-mobility;
- defensive management;
- reconstruction/infrastructure;
- line of communication maintenance; and
- chemical and biological damage control and protection.

The review has concluded that:

- **The most urgent upgrade is some engineer equipment to support mobility of the LAV but force development action is required to determine the most appropriate equipment. This need can be dealt with in the prioritisation exercise in Phase Two.**

## Force Protection

The second set of tasks required is associated with the protection of the force. Specific tasks within this group include:

- providing protection for operational forces, means and non-combatants:
  - preparing operationally significant defences;
  - removing operationally significant hazards;
  - protecting use of electro-magnetic spectrum in the area of operations;
  - protecting use of acoustic spectrum in the area of operations;
  - conducting evacuation of non-combatants from the area of operations;
  - providing for combat identification;
  - establishing NBC protection in the area of operations;
  - conducting joint search and rescue operations;
  - co-ordinating and conducting personnel recovery;
  - developing and executing actions to control pollution and other hazards in the area of operations;
  - co-ordinating/providing counterdeception operations;
  - conducting countermine activities;
  - employing operational security in the area of operations;
- protecting systems and capabilities in the area of operations;
- providing security and means and forces:
  - providing counter reconnaissance in the area of operations;

- protecting and securing flanks, rear areas and communication zone in the area of operations;
- protecting operational critical installations, facilities and systems; and
- protecting sea, air and land lines of communication in the area of operations.

The review has concluded that:

- **Routine replacement of equipment with some supplementation to meet the increased support demand of motorised infantry will be required. Such projects are generally low cost and will be managed within the minor and major elements of the reprioritised capital plan.**

## LOGISTICS MANAGEMENT

Logistics management refers to the ability to manage the human and equipment support elements in pursuit of operational objectives. It also encompasses logistics support to distribute supplies and maintain the force, including medical support. Tasks include:

- distributing supplies and providing transport services;
- co-ordinating supply of arms, munitions and equipment in the area of operations;
- synchronising supply of fuel in the area of operations;
- providing for maintenance of equipment in the area of operations;
- coordinating support of forces in the area of operations;
- managing logistical support in the area of operations;
- building and maintaining sustainment bases in the area of operations; and
- performing civil military engineering support.

The review has concluded that:

- **the logistics requirements need to be analysed to:**
  - **assess operational requirements following the introduction of the LAVs/LOVs; and**
  - **ensure compatibility with strategic lift requirements.**

### A Benchmark Capability Structure

From the above, a set of benchmark capability requirements can be established for the land forces. These are the need to have:

- a deployable land forces unit based on a light infantry battalion group;
- sufficient reconnaissance, surveillance and intelligence to support tactical operations within the area of operations;
- sufficient fire support capability to support tactical operations within the area of operations;

- logistics and engineer support to deploy, manoeuvre and sustain the land force tactical unit;
- equipment, and training to ensure capability to carry out tactical combat operations within the area of operations; and
- a sufficient command, control, communications, computing and intelligence system to integrate the tactical and operational elements.

Principles that need to be considered in establishing these capability requirements, for the land forces include the need to have:

- sufficiently equipped and trained for combat as well as peacekeeping;
- self-sufficiency for assigned tactical tasks and responsibilities;
- sustainability for extended periods, based on a rotation battalion and Regular Forces (RF) and Territorial Forces (TF) numbers and structure that supports expansion;
- deployability;
- interoperability with key defence partners, particularly Australia;
- force readiness at a level that supports rapid deployment;
- up to date technology in order to reach operational effectiveness; and
- fiscal sustainability.

## **CAPABILITY REQUIREMENTS FOR LAND FORCES CONCLUSIONS**

The review has considered a range of security events to which the Government could be required to commit land forces. Three peace support scenarios ranging from low Chapter VI level peacemaking to Chapter VII combat operations have been selected. The military tasks within each scenario were assessed to determine the minimum level of capability to reach the standards and effects required.

In general, the analysis confirms that the structure and orientation of the land forces as light infantry with protected mobility is appropriate to the role New Zealand can be expected to play. It is thus consistent with the DPF. A battalion-sized contribution based on the benchmark specifications will meet both the demands of tasks likely to be assigned to New Zealand and the need to demonstrate a distinct national presence.

The type of capabilities held broadly match those expected to be inherent to a light infantry battalion assigned responsibility for an area of operations. The quality of some capabilities currently held, however, is below the standards required to assure self-protection in all circumstances, to be efficient in combat or enforcement tasks, and to meet increasing standards of accuracy demanded by restrictive rules of engagement. Other capabilities have fallen below the technology standards required to support command and control and to provide adequate situational awareness over the greater area canvassed by the infantry and their vehicles.

A small number of projects associated with the capability requirements are urgent and can be progressed quickly. Others will require better definition of the equipment and technology options and expected cost before they can be prioritised into the capability blueprint.

Beyond this minimum standard, there are options to vary the quality and utility of the land forces. These will be discussed in the next section.

## DISCUSSION OF LAND FORCE CAPABILITY OPTIONS

### INTRODUCTION

The previous section has discussed the capability requirements of the land forces, and has described deficiencies that need to be addressed. This section discusses potential options for varying depth or performance of the land forces.

There are four variables:

- size and sustainability of the land force (including the capacity to resource concurrent operations);
- readiness;
- ability to contribute above the tactical self-sufficiency level; and
- logistic support capability.

### Size

The previous chapter has identified that the minimum nationally identifiable land forces needs to be a deployable battalion group. To provide some concurrent operation capacity, or to sustain it at strength for one rotation, a minimum of two battalions is required. If longer sustainment is required, three battalions are needed. The two- or three-battalion structure will be organised within a brigade framework for training but a deployable brigade itself is not required. Each battalion should consist of a headquarters, three infantry companies, a reconnaissance company, and combat support elements. With the addition of logistics, medical, engineers and signals capabilities, these form battalion groups. Artillery may form part of a battalion group, for tactical support, but is usually provided at the next level of brigade.

A battalion group composed of all the elements needed to support combat or high activity operations may consist of 1200 personnel. Smaller battalions, however, may be more appropriate for lower intensity operations where smaller numbers or fewer capabilities are required.

The option of deploying company groups into low-level operations exists. It may be appropriate in some circumstances.

In light of the above it may be concluded that the **minimum requirement is for two infantry battalions and sufficient support to form battalion groups.**

## SUSTAINABILITY

Sustainment of deployed forces for extended periods is a problem for countries with small armed forces. This is particularly so when contributing to PSOs. These invariably take longer than expected, achievable exit strategies are usually not in place, and disengagement is seldom possible within the “reasonable” period for which forces have been structured to deploy. Although an actual crisis may be resolved relatively quickly (i.e. a cease-fire arranged), often there is a considerable period before the situation is stable enough to reduce or withdraw forces. Nevertheless, contributing nations **can** declare time limits on their contributions, and withdraw forces at the end of their stipulated period.

For New Zealand, such a strategy is problematic for operations close to home. There is an expectation that Australia and New Zealand will play a leading role in PSOs and will remain committed through the critical period. As an example, East Timor may require four rotations of New Zealand’s battalion-sized contribution. This is to be generated from a force structured to provide one rotation in accordance with the current output statement. Clearly the output requirement no longer reflects the reality of some PSOs in which New Zealand is expected to have a strong role.

It would seem logical, therefore, to plan and structure the land forces to allow sustainment for a longer period. Given that it is customary to allow a two-year gap between deployments for individuals (to minimise domestic pressures on families), an output requirement of two years (or three rotations) could be considered. Sufficient regular and non-regular personnel would underpin this with each doing one deployment. Extension beyond that could be achievable by reusing people previously deployed, together with some supplementary recruiting to cover attrition. A sustainment period of two years effectively gives indefinite coverage.

**A two-battalion structure will not support sustainment of a full-strength battalion group for two years** unless individual rotation lengths are extended or New Zealand personnel are augmented with other nations’ troops. **Otherwise a third battalion must be created.**

### **Sustainment of Full-Strength Battalion Groups**

A battalion at full strength is more likely to be used for higher intensity or peace enforcement operations. It is possible that commitment to a high intensity phase of the operation will be limited, and the force can be downsized as operations reduce in tempo as the situation becomes resolved, but this cannot be assured. **Increasing force structure to provide for a third full strength battalion would require a very substantial injection of capital and operating funding to equip, house, train and pay the additional personnel. An alternative is to maintain the permanent establishment of the present two-battalion level and accept either that New Zealand will commit for a twelve-month period only or extend personnel tours when withdrawal is absolutely not possible.**

**Another alternative is to use measures such as short term contract recruiting and enhanced Territorial Force availability strategies to generate the equivalent of three battalion manning for a defined period.**

A further strategy to continue commitment to a high intensity operation beyond the period that land forces can be sustained at full strength is to commit another contribution or combination of capabilities of equivalent value. This will only be possible when the intensity or tempo of the operation permits this.

## Sustainment of Smaller Units

Deployment of smaller battalions will be typical of regional PSOs conducted at a lower intensity. Inclusion of other nations' military personnel is a useful strategy to reduce the load on New Zealand's small force. This is the case in East Timor, where Fijian, Canadian and Nepalese companies and an Irish platoon have been variously attached to the New Zealand battalion. There is international benefit in providing a vehicle for smaller contributions to become involved in operations. There may not, however, be any volunteer "supplements" to the New Zealand contribution in the more unattractive or drawn-out operations.

Use of smaller battalions of around 600 New Zealand personnel allows more rotations to be constructed, and increases sustainability. Four rotations are, therefore, being planned for East Timor. Sustainment beyond this, however, will require recruiting additional personnel to augment the regular and territorial forces for a period. Temporary augmentation of forces by recruiting personnel for fixed short terms is a feasible strategy.

A range of measures from using other national contributions to ad hoc cross-training of non-infantry personnel have been used, but the limit has now been reached where further sustainment will require temporary force augmentation.

## Personnel

There is one critical issue underlying sustainment of the force. Personnel numbers have been held below establishment in all three services for budgetary purposes. While this has not unduly affected routine training and force preparation, or initial deployments, it directly affects sustainment. Sustainment is dependent on the required depth of personnel being available. If the NZDF is to maintain the capability to **commit and sustain** its forces for the longer periods now expected, personnel budgets must be funded to the required levels.

Availability of non-regular force personnel for long-term operations will be problematic. While the East Timor deployment has been well supported by the Territorial Force, many have been unable to retain their civilian jobs. Job protection measures may be necessary to protect the interests of both employer and the Territorial Force employee.

Determining the strength at which the land forces should be held is an issue. Based on its own assessment, the NZDF will require another 1000 troops to be able to sustain a full strength battalion group at its maximum expected rate of effort, and establish the reconnaissance companies required in the battalions. In setting this figure, the NZDF does not advocate the raising of a third battalion with its attendant heavy overheads. An increase of half of this number was agreed following the last Defence Assessment (although for a different reason) while the other half represents the level of personnel shortfall common across the NZDF where strength has been deliberately held down as a fiscal management strategy.

**While the current force structure can produce only one rotation of a full strength battalion group, it can provide smaller battalions where appropriate. This flexibility permits sustainment for longer periods.**

An increase of 1000 Regular Force positions carries with it a significant increase in operating costs over the present level. Deployments to date have not required a battalion to be sustained at its highest strength. This study has not been able to measure the effect of lower manning on sustainability. It should be noted, however, that holding any NZDF unit at lower strength would not necessarily affect initial deployability. It will affect sustainment if high levels of effort are required. **The output requirement should be reviewed to either set delivery or sustainment to alternate levels obtained from the two-battalion structure (augmented as needed) or to clearly articulate the need to sustain the maximum rate of effort.**

### Concurrency

Potential demand for peace support contributions in the region is high. New Zealand is unlikely to be able to avoid concurrent operations (for example New Zealand may be called upon to respond to a natural disaster while being heavily committed to a peace support operation). The commitment of a battalion to East Timor is significant and long running. With a battalion deployed, there is limited capacity to handle concurrent operations. A concurrent company level deployment would be possible within the limitations of the logistics and support resources ability to manage multiple consumers.

In general, a two-battalion structure does not support concurrent deployment of two battalions or one battalion and one company at a high rate of effort with any significant sustainment capability for low-level military commitment. In an emergency, however, New Zealand could put out two smaller battalions at once. Nevertheless, only one could be sustained for a single rotation, but there would be some very serious quality limitations.

At a company level of commitment, and with up to two companies deployed, there is long term sustainability. With three separate companies deployed, sustainability for three rotations can be managed depending on the ability to manage manpower in critical experience and skill levels. Beyond that, the need to repeat rotations for a significant number of personnel creates problems of access to sufficient Territorial Force and retention of skilled Regular Force personnel.

Government has a choice about committing to concurrent operations, to use other non-combat land force contributions, or to use other NZDF force elements as alternative contributions. Permanent structuring for a larger combat land force to cover a larger number of concurrent operations will significantly drive up costs as indicated earlier in the discussion on sustainment.

Peace Support Operations in the Pacific region and globally can be expected to continue at the present level or grow. Situations will take longer to resolve, and commitments are likely to be for extended periods. There will be demand for concurrent deployments from time to time. Government can manage the level of effort required by careful selection of the contingencies to which it commits, and, to a lesser extent, the duration of its commitment.

Some flexibility exists in the current two-battalion land force structure to generate and sustain a credible effort. Better performance would be possible if the present force was at full strength. Augmentation along the lines discussed in the earlier sustainment section will provide further capability. However, a permanent increase to a third permanent battalion would appear to have high costs which would exceed the benefit to be gained.

## Readiness and Deployability

New Zealand holds its land forces at a graduated level of readiness: it can generate a battalion group by providing an initial company group rapidly, with the balance of the battalion group following later subject to achieving the required training levels and the speed of transportation into the area of operations.

In general, however, the New Zealand battalion is at longer readiness than some rapid reaction forces raised by larger countries. This is not a major issue given that it has to be integrated into a brigade provided by another nation or nations, and it will usually be expected to arrive slightly after the lead units of that brigade.

Early response by contributing countries to peace support contingencies is highly valued. Humanitarian crises must be resolved quickly. The UN has indicated that it places high priority in securing forces that can be committed rapidly to contain situations. It has stated that forces are often needed on the ground within 30 days to provide effective stabilisation. Although New Zealand's response capability lies outside this timeframe, it is known that it is nevertheless of significant value to the UN.

Readiness is essentially a cost issue. Shortening military response time requires maintenance of a higher trained state, continuous pre-deployment training, and possibly quarantining and pre-positioning of equipment (which is then unavailable for training activities). New Zealand could choose to place the deployable battalion at higher readiness, but this would incur additional equipment costs, and higher operating costs to meet the increased training and preparation overheads.

Readiness can also be increased progressively if sufficient warning time prior to commitment to deploy is given. This requires an intelligence system that monitors and detects changes in strategic circumstance, and allows Government to give early warning of a potential decision to commit forces.

New Zealand is regarded as a responsive, reliable and consistent contributor to UN operations. It has demonstrated that it can quickly make political decisions in response to the demands of UN operations, which enhances its readiness. **While there may be some political benefit in holding forces at a higher level of readiness, there are other investment priorities in modernisation and development of capability, or sustainment of forces, that would have a more direct benefit on the effectiveness of the force.**

## Self-Sufficiency

New Zealand could choose to structure its land forces to provide tactical self-sufficiency, or place more responsibility on the UN or other combined force commander to allocate support to meet any shortfall in capability. However, the latter option has implications for the operational and political impact of a New Zealand contribution. It is the ability of a New Zealand force to be ready for action soon after arriving in a crisis area that makes it effective. Reducing the tactical self-sufficiency of a New Zealand land force contribution would thus reduce its operational and, as a result, its political effectiveness. Alternatively, New Zealand could choose to commit only to those operations where the operational demand matches reduced capabilities held. Such measures will, however, reduce the value of New Zealand's contribution, and add to any multinational group's burden. Such a move would also set capability at a lower level of performance and utility than at present and directly impact on effectiveness to the multinational force.

New Zealand could also choose to contribute a share of combat and support capability at the operational level. Such a contribution could be a land force capability or it could be comprised of other NZDF assets. The marginal value in contributing another land force capability may be lower in a contingency involving a number of larger countries as it is likely that good theatre level support will be available. For a contingency in which Australia and New Zealand are the main contributors of combat capability, however, there is likely to be both a greater expectation of burden sharing, and a high political gain in doing so.

This operational level capability pool must be furnished by contributions from the multinational force members. Where major countries are involved, such as the US or NATO members, it may be expected that they will furnish a significant majority of those capabilities. For lower level regional operations, however, where Australia and New Zealand are the principal providers of the force, it is unlikely that Australia will be able and willing to furnish all operational level assets. Neither is it likely to be willing to take sole responsibility for protection and support of the combined force.

Therefore, **a New Zealand contribution must be self-sufficient for its tactical tasks.** This is expected of all tactical units employed under the doctrinal principles shared with New Zealand's partners. Dependency on others would create non-standard demands on them that they will not usually be equipped to provide, and would create some "drag" on other coalition members.

**New Zealand could contribute to the operational pool of supporting capabilities.** The demands on New Zealand to contribute to this level of capability will be higher where New Zealand has a major role in the combined operation, **particularly if this is in the immediate region and it is partnered with Australia.**

### **Logistic Support Capabilities**

Several support capabilities, such as medics, engineers, and logistics are sized to support the military task and force structure at its maximum rate of effort. At lower levels of military effort, spare capacity may be used for civil tasks that are characteristic of such operations. Alternatively, these capabilities may be committed to humanitarian and PSOs in their own right where it has been decided combat forces are not required, or the Government does not wish to participate with a combat option. Thus Government has some capacity inherent in the present force structure to provide support to communities.

Notwithstanding that, Government could increase the size of these capabilities to provide a greater capacity for civil tasks in conjunction with, or separate from, military operations.

While military forces can be used on these tasks, there are many international NGOs and other government agencies that are specifically set up to contribute to reconstruction, and some of those have the capability to operate under rudimentary conditions. This suggests that military capability is best used in circumstances where the supporting infrastructure is too disrupted to support civil agencies, or civil support is not available (such as in the stages of peace restoration where the threat level is still high).

Therefore, a decision to hold additional military capability with its higher overheads, specifically for this purpose, should take into account whether it is simply competing with traditional civil sources of support, or filling a gap in supply against demand. The utility of military forces in this field lies in its inherent flexibility and self-reliance. This suggests that it should only be used where other agencies cannot contribute, or political advantage can be obtained.

In principle, however, the overhead of holding military capability solely for civil tasks is high: commercial enterprises and NGOs are far more efficient in the provision of this capability.

### **CONCLUSIONS OF LAND FORCE CAPABILITY OPTIONS**

The most significant issue relating to options is the size of the land forces. Options exist to increase strength to provide adequate sustainment together with capacity for concurrent operations. Permanent increase to provide a third battalion would be expensive and is not favoured. Improved sustainment and concurrency capability can be obtained through measures such as improved Territorial Force availability, short term recruiting and use of other national forces where applicable. Sustainment and concurrency will be below the level required if the land forces remain at their present strength.

Readiness could be increased, but this is a lower priority. The cost of doing so would have to be assessed against the marginal benefit.

Non-combat capabilities could be enlarged, but there is no clear requirement for investing further in these capabilities, nor can the marginal benefit be easily assessed. The priorities are to rectify capability deficiencies to meet the standards required to commit the land forces safely to operations, and to provide sufficient personnel to sustain the force.

## SEALIFT

Deployment of land forces could require both strategic and tactical sealift. Strategic sealift consists of movement of heavy and large equipment and stores from New Zealand to an assembly area, normally a fixed port where the equipment is married up with the personnel who would be deployed by air. In some circumstances delivery may be directly into the operational area, either to an available port facility, or if a docking facility is not available, to a location where unloading can be accomplished "over the beach".

Tactical sealift requires a capability to deliver both personnel and equipment into the operational area so that the forces are able to undertake operational missions as soon as they are safely ashore. Tactical sealift ships are specially designed to land both personnel and equipment without requiring access to a port facility.

Both requirements were demonstrated in the deployment of the New Zealand contingent to East Timor. Strategic sealift was provided by a chartered commercial Roll On-Roll Off (RO-RO) ship, from New Zealand to the assembly area at Darwin. From Darwin, the equipment was deployed into the Suai operational area by a French military tactical sealift ship which had the ability to off-load the M113 carriers and heavy trucks over the beach.

A limited over the beach capability can be built into a modified RO-RO ship through a combination of cranes on the deck, cargo landing platforms carried on the ship (called Landing Craft Vehicle and Personnel or LCVPs) and deck space that permits off-loading using helicopters. This method is suitable for pallets and light vehicles but not for heavy loads such as the LAV's, heavy trucks and engineering equipment.

Given the small number of port facilities in the South Pacific and parts of South-East Asia, an ability to off-load cargo independently over the beach would be a useful military and civilian asset. However, the requirement to off-load heavy military cargos, such as LAVs, in this manner is very infrequent. In most circumstances the limited over the beach capability that can be built into a RO-RO vessel will meet New Zealand's military requirements. On those occasions where heavier loads need to be off-loaded where port facilities are not available, it is likely to be under circumstances where New Zealand would be operating as part of a multinational force when tactical sealift ships of other nations would be available to provide this capability.

In disaster relief operations in the South Pacific, if all of an island's ports and airfields have been rendered unserviceable, there may be a requirement to off-load over the beach. The majority of items that would be required in a disaster relief operation (specialist personnel such as medics and engineers, blankets, tents, building materials, vehicle spare parts, light trucks and so on) could be off-loaded from a modified RO-RO. However, there may be a requirement to deploy items that are too heavy for a modified RO-RO, such as bulldozers, heavy trucks and heavy engineering equipment. Often these items are on the island already and simply need to be repaired. Alternatively, it may be possible to deploy some heavy equipment by air or, if the airport is unserviceable, by airdrop. In some extreme cases neither a modified RO-RO nor airdrop will allow for the delivery of heavy equipment if this is required. This risk however, is assessed as low, as disaster relief operations have not been impeded in the past for this reason.

### **Box 9 - The Sealift Requirement**

While the concept of sealift is often split into strategic sealift and tactical sealift, the distinction between the two can be blurred. To determine the requirements for a sealift ship it is better to think in terms of capacity (i.e. what can be carried) and load-off-load (i.e. where it can be taken to).

#### **Capacity**

The requirement is to transport equipment to support a battalion group. Personnel will normally be deployed by air. One sealift ship should have the capacity to move sufficient equipment to deploy and sustain the battalion group until the next load arrives. Equipment is moved in stages to allow more rapid preparation and departure and to simplify the task of setting up in the crisis area by gradually assembling what is needed in a logical order of priority. There may also be a need to pre-position troops off-shore to increase the options open to Government and to allow more rapid deployment. Separately, in a disaster relief operation there may be a requirement to provide emergency short-term shelter and a means of emergency evacuation for a large number of people. Thus the capacity required is as follows:

- 1000 lane metres of vehicle space;
- space for 30 containers;
- space for 100 troops;
- space for sufficient fuel and water to sustain landed forces until permanent facilities are found and the capability to get the fuel and water ashore; and
- separately, space, when empty, for 1000 civilians

#### **Loading/Off-loading**

The capability to load and off-load determines the flexibility of the sealift ship, effectively where it can go. The requirements are increasingly demanding as you move through the different facilities available:

- a commercial port (where a container ship would be sufficient);
- a basic RO-RO capable port (where a RO-RO would be sufficient);
- a basic wharf or stone jetty (where a RO-RO with a quarter ramp would be sufficient); and
- no facilities, where the requirement is to off-load over the beach. (Here the type of ship required depends on what needs to be off-loaded. For most loads a modified RO-RO would be sufficient, for the heaviest loads an amphibious landing ship would be necessary.)

The discussion of the different options will outline the marginal costs involved in increasing the flexibility of the sealift ship.

The military requirement in the NZDF for sealift is sporadic. Any ship which is owned and operated by the NZDF primarily for strategic and tactical sealift therefore would be available for other tasks, including disaster relief in a civil emergency in the South Pacific, low-level surveillance and presence, and logistic support to deployed forces. In general, the speed, manoeuvrability and lack of combat systems limit the utility of a sealift ship for most maritime patrol tasks. The hull design can make these ships unsuitable for safe employment in the Southern Ocean or Ross Sea. A sealift ship can be a valuable contribution to a multinational effort in its own right. A sealift ship could have been gainfully employed for the operations in Bougainville, East Timor and Solomon Islands.

A dedicated sealift ship would be available for immediate tasking for 90% of the year. For the remaining time, the ship would be available within 28 days. Analysis of the expected usage dedicated to sealift showed that minimum employment for exercises and other tasks would amount to about 80-105 sea days. In addition, about five weeks would be required for maintenance and a further five weeks for leave. During the remaining 11 weeks, the ship could be assigned other tasks in support of other defence outputs.

The key considerations in determining how to meet New Zealand's sealift requirement are:

- availability to meet the requirement for a timely deployment;
- sufficient capacity for strategic sealift of a battalion group size land force, with supporting helicopters and national support elements;<sup>30</sup>
- the degree to which an over the beach capability and tactical sealift is required and its affordability<sup>31</sup>; and
- the utility for other tasks.

## The Options

Four options were considered for providing sealift:

- reliance on commercial chartering arrangements;
- acquisition of a used military sealift ship;
- purchase of a new purpose built ship; and
- modification of CHARLES UPHAM.

The purchase and conversion of another used RO-RO vessel and the acquisition of a new modified design RO-RO vessel were also examined. Both of these possibilities were found to have no significant advantage over the modified CHARLES UPHAM and carried significantly higher costs and risks.

If one of the first three options were chosen, the CHARLES UPHAM could be sold. The receipt from this sale would be likely to be between US\$6-8M.

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<sup>30</sup> This requirement is outlined in more detail in Box 9.

<sup>31</sup> This requirement is outlined in more detail in Box 9.

## **Chartering**

This was the approach taken for Bosnia and East Timor and it is the cheapest option. It has two drawbacks. One drawback is that there is no guarantee a suitable ship will be available when needed to meet the requirement for a rapid response. Previous studies have shown that ships available for charter are usually operating at long distances from New Zealand. This potentially prolongs the time it would take to deploy a New Zealand contingent.

The other drawback is that commercial ships come as they are. They cannot provide any tactical sealift capability. This can limit government choices in responding to a security event. The limitation could be significant for situations in the South Pacific where there is a high expectation that New Zealand would independently play a major role in a crisis or in response to a natural disaster.

New Zealand has only two experiences on which to make judgements on this: Bosnia and East Timor. In the case of Bosnia the arrangement was unsatisfactory both because of the long time it took to arrange the charter and because the shortcomings of the ship required vehicles to be stowed on open decks. In the case of East Timor the charter arrangement was satisfactory.

There could also be other risks associated with the commercial nature of charter arrangements. There was a recent case in Canada where a ship operator refused to enter port and unload the cargo of Army equipment because of a dispute about payments among the commercial firms involved. As a result the equipment was at risk of being lost in the open waters of the North Atlantic. The situation was only resolved when the Canadian Navy undertook a risky operation and seized the ship and forced the master to take the ship into port where the military cargo could be discharged safely. As a result of this experience the Canadians have put renewed effort into their plans to acquire military sealift ships.

## **Acquisition of a Used Military Sealift Ship**

Military sealift ships being offered for sale are usually meeting the end of their useful life. The initial capital cost of these second hand ships can be low but the work necessary to modify and maintain military specification ships is usually significant and costly. This is greater than for commercial specification ships because of greater complexity and the heavier build standard of military ships. Many older military sealift ships also require a large crew (200 for the Newport class acquired by Australia versus 50 for CHARLES UPHAM). Through life cost penalties can completely offset the advantage of the low initial purchase price.

Recent conversions of ex-USN Newport class amphibious ships by Australia required a considerable amount of restorative maintenance and significant modernisation to tailor them for the Australian requirement. The cost was extremely high with the final conversion cost price in the region of A\$200M per ship.

Only in circumstances where heavy vehicles and plant must be unloaded across the shore would the additional capability of a specialist amphibious landing ship be required. In circumstances where the LAVs or other large vehicles are critical, no ports are available, and no tactical sealift support is available from other nations, New Zealand would require a full tactical capability of its own. This requirement is assessed as infrequent.

In specialist ships, load capacity is traded off for the unique construction and configuration requirements for direct unloading of heavy equipment. Reduction can be quite marked in strategic lift capacity. The core requirement to transport New Zealand forces is the strategic move. Compromising this for the limited need for tactical offload of large vehicles, when this is likely to be achievable by other means, is not desirable. It is difficult to assess how frequently the need to tactically offload heavy vehicles will arise. The additional investment to achieve that margin above the capability of a modified CHARLES UPHAM is in the order of \$200m. A ship could not be acquired before 2005.

### **Purchase of a Purpose-Built Ship**

The concept of using a multi-role ship to perform sealift tasks and also a range of tasks such as resource protection to reduce loading on the frigate fleet requires a wider study than could be completed within the time constraint for the completion of the Phase One review. Issues such as trade-offs in frigate availability, crew combat training, sustainability, and logistics support are complex. In catering for the differing roles in multi-role design, each role will invariably be compromised to some extent. This is a possible option, however. A ship purpose built for sealift could also be designed to carry out tasks such as disaster relief, EEZ surveillance and patrol, search and rescue, and presence. It could support service assisted evacuations of nationals, provide a command and control facility for land force operations, and provide a host platform for peace talks. When suitably modified, CHARLES UPHAM could do some of these tasks under certain conditions. However, its lack of armament may be a limitation for some surveillance, response and emergency evacuation missions and it could not operate a helicopter while underway.

Both the Royal Navy and Republic of Singapore Navy have tactical sealift ships which have utility in other roles - HMS OCEAN and RSS ENDURANCE. HMS OCEAN's capabilities exceed the NZDF requirement. The RSS ENDURANCE, however, presents a compromise that could meet many of the NZDF's requirements. Its design emphasises the tactical sealift role ahead of strategic utility. The vessel could tactically offload heavy vehicles up to LAV size. It has two on-board helicopter operating positions, and can operate helicopters at sea. The Navy Seasprite could be operated on such a ship and the decks are capable of taking larger helicopters operated by other nations. It has a troop carrying capacity in excess of the tactical requirement.

This class of ship is better suited to patrol and surveillance tasks than the CHARLES UPHAM, in that it can carry its own helicopters and operate them at sea. It also carries a 76mm gun. The tactical unloading facility comes at the expense of lift capacity. RSS ENDURANCE has only half the strategic lift capacity of a modified CHARLES UPHAM. This option therefore only partially meets the strategic lift requirement, while it fully meets the tactical requirement.

No data is available for the cost of a new multi-role capable sealift ship designed specifically for New Zealand. Using RSS ENDURANCE as an example, the marginal cost of a multi-role ship over modifying CHARLES UPHAM is expected to be around \$400m. However, if this ship also replaces CANTERBURY, the marginal cost would largely disappear. A more detailed study would be required to assess the economic benefit of a single multi-role ship meeting the sealift requirement **and** some of tasks currently assigned to the naval combat force, i.e. as a replacement for both CHARLES UPHAM and CANTERBURY. A suitable ship could not be acquired before 2005.

### **Modification of CHARLES UPHAM**

When modified for its role as a sealift ship, CHARLES UPHAM will have the capacity to meet the requirement for strategic sealift and it will have a limited tactical sealift capability with deck cranes, on board LCVPs and, when anchored, the ability to facilitate helicopter sling loading from the deck. It can also be used to carry a company size force of land forces with their equipment, giving the ability to position forces close to a potential trouble spot. The modified CHARLES UPHAM will not have the ability to unload over the beach the LAVs, heavy trucks or heavy engineer plant equipment.

The modifications envisaged will enable the vessel to undertake disaster relief and humanitarian operations. The ship will have the capacity to supply fuel and water supplies over the beach and it could provide emergency, short-term shelter and a means of emergency evacuation for a large number of people (1,000+).

The design for the modification is partially done and can be completed within six months. The modification work can be undertaken following a worldwide competitive tender, or by a shorter directed tender process for New Zealand industry. The earliest the modified ship could enter service is January 2003. The estimated cost of the conversion is \$35-40 million. Conversion is technically simple, the basic ship structure can easily accommodate it and the condition of the ship's structure is well known through the extensive assessment conducted within the Lloyds class survey. Based on the design and specification work done to date, it is assessed that conversion of CHARLES UPHAM is a low risk option and the ship would have a 15-year post-conversion life.

### Summary – Sealift Options

	CHARTER	USED MILITARY SEALIFT SHIP	PURPOSE BUILT SHIP	CHARLES UPHAM
Availability	Uncertain	High	High	High
Strategic Sealift Requirement	Uncertain but probable	Partial	Partial	Meets fully
Tactical Sealift Requirement	None	Meets fully	Meets fully	Partial
Utility for Other Tasks	N/A	Moderate	Better	Moderate
Capital Acquisition Cost (Incremental)	Nil	\$260 million	\$440 million	\$35-40 million
Annual Operating Costs	Unknown, but low cost	\$40 million	\$54 million	\$13 million
Earliest In-Service Date	N/A	2005	2005	2003
Life of Type	N/A	20 years	30 years	15 years
<u>Overall Risk</u>				
- Operational	Highest	Moderate	Moderate	Lowest
- Financial	Lowest	High	Highest	Low

### CONCLUSION

For sealift, the modified CHARLES UPHAM, has some shortfalls in off-loading cargo where ports are not available, but this is not assessed as presenting a significant military risk. It also has limitations in its suitability to undertake other tasks when not used for its primary sealift function. A ship like the Singapore ENDURANCE class has a better over the beach capability and is more versatile. It only has half the strategic lift capacity of CHARLES UPHAM, however, and it costs significantly more – in the region of \$440 million as opposed to an additional \$35-\$40 million to modify CHARLES UPHAM. It may, however, be a viable single replacement platform for both CHARLES UPHAM and CANTERBURY. The cheapest option is to sell CHARLES UPHAM and rely on chartering. A modified CHARLES UPHAM is the most cost effective option for meeting the core requirement for assured strategic sealift.

**ACRONYMS**

<b>ADF</b>	Australian Defence Force
<b>APEC</b>	Asia Pacific Economic Cooperation
<b>ASEAN</b>	Association of South East Asia Nations
<b>C2</b>	Command and Control
<b>CSS</b>	Combat Services Support
<b>DoD</b>	Department of Defence
<b>DPF</b>	Defence Policy Framework
<b>EEZ</b>	Exclusive Economic Zone
<b>EW</b>	Electronic Warfare
<b>FPDA</b>	Five Power Defence Arrangement
<b>IO</b>	Information Operations
<b>LAV</b>	Light Armoured Vehicle
<b>LCVP</b>	Landing Craft, Vehicles and Personnel
<b>LOV</b>	Light Operational Vehicle
<b>NATO</b>	North Atlantic Treaty Organisation
<b>NGO</b>	Non-Governmental Organisation
<b>NZDF</b>	New Zealand Defence Force
<b>PSO</b>	Peace Support Operation
<b>RF</b>	Regular Forces
<b>ROEs</b>	Rules of Engagement
<b>RO-RO</b>	Roll on-Roll off (vessel)
<b>TF</b>	Territorial Forces
<b>UK</b>	United Kingdom
<b>UN</b>	United Nations
<b>UNTAET</b>	United Nations Transitional Authority East Timor
<b>USN</b>	United States Navy

## GLOSSARY

**Air interdiction** - An air operation conducted to destroy, neutralise or delay the enemy's military potential before it can be brought to bear effectively against friendly forces at such a distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required.

**Capability** - The ability to produce an effect, generally achieved through a combination of people, training and doctrine, equipment, their readiness and how they are used.

**Capability blueprint** - A plan that will show how we move from the status quo to the appropriate level of capability for the NZDF, in order of priority.

**Chapter VI operations** - refer to operations conducted with reference to Chapter VI of the UN Charter which deals with the "peaceful settlements of disputes". These are routinely traditional peacekeeping tasks such as ceasefire monitoring.

**Chapter VII operations** - refer to operations conducted with reference to Chapter VII of the UN Charter which deals with the use of "air, sea or land forces ... to maintain or restore international peace and security". This could include combat operations as part of peace enforcement.

**Close air support** - Air action against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces.

**Direct fire** - Fire delivered at a target that can be seen by the aimer.

**Doctrine** - The fundamental principles by which military forces guide their actions in support of objectives. It is authoritative, but requires judgement in application.

**Indirect fire** - Fire delivered at a target that cannot be seen by the aimer.

**Interoperability** - Interoperability is the level of standardisation required for New Zealand to work with other countries.

**Joint and Combined Operations** - With very few exceptions, the NZDF will be involved in joint operations, that is, operations that involve more than one service. While the single services are the basic building blocks of military capabilities, they must be structured to operate in a joint environment. For local, low level tasks, this involves the New Zealand Navy, Army and Air Force working together. For most other operations the NZDF would likely be part of a larger multinational force. In these circumstances, the NZDF force elements may be combined with single service elements of other nations.

**Non-Governmental Organisation** - NGOs is an official terms used in Article 71 of the UN Charter to describe a wide range of primarily non-profit organisations motivated by humanitarian or religious values, that are usually independent of governments, the UN and commercial sectors. NGO sector is extremely diverse and includes thousands of very different organisations varying in size, maturity, expertise, quality and mission. Increasingly, NGOs are used by national and international donors as effective and non-political responses to complex emergencies.

**Readiness** - Readiness describes the level of a particular unit's availability to conduct combat operations. The term covers all the elements necessary for a force to go into combat, such as levels of training, manning, equipment, stores and supplies, and morale.

**Rotations** - Rotations occur when a unit in an operational theatre is replaced by another so that the first can recover and retrain. The first rotation is defined as the first replacement force for the one originally deployed.

**Self-sufficient** - A force is self-sufficient if it has enough inherent capability to complete its primary task and all reasonable implied tasks.

**Shaping** - Influence through political, military or other means to change the environment for your benefit. Usually conducted in anticipation of a subsequent event or operation. It can include the use of political, diplomatic or military activity, including the use of force.

**Sustainability** - Sustainability is the ability to support a designated force through the duration of an operation. It includes, for example, sufficient personnel for initial deployment, required rotations and casualties, and logistic stocks required by the deployed forces.

**Tempo** - The tempo of operations is the pace of events. It includes the ability to move, think and react. If one member of a combined operation is working at a lower tempo, 'coalition drag' is created, that is the coalition is forced to slow down to accommodate the least capable partners.

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