

CONSEIL DE L'ATLANTIQUE NORD  
NORTH ATLANTIC COUNCIL

DOWNGRADED TO NC

SEE: DN(2005)0002

DPP

3765



CHRONO

EXEMPLAIRE  
COPY

N°

220

SECRET

(may be downgraded to NATO UNCLASSIFIED  
when separated from attachments)

ORIGINAL: ENGLISH  
7th March, 1978

DOCUMENT  
DRC/D(78)2

DEFENCE REVIEW COMMITTEE

PROCEEDINGS

of the

1978 NATO DEFENCE PLANNING SYMPOSIUM

A NATO Defence Planning Symposium was held at Oberammergau, Germany from 16th to 18th January, 1978, with the participation of well over one hundred civilian and military representatives from NATO nations and organizations. The Major NATO Commanders, SACLANT and SACEUR, were also present.

2. This year the Defence Planning Symposium was devoted entirely to consideration of the Long Term Defence Programme. In addition to a detailed presentation on the work of one of the Task Forces, participants heard and discussed both national views and approaches presented by NATO civilian and military authorities.

3. The purpose of this document is to provide the participants to the Symposium with one volume of the Proceedings containing the full texts of presentations as provided by the authors.

4. While the overall level of classification of the attached Proceedings is NATO SECRET, the individual papers may be treated according to the classification indicated on each page.

(Signed) W.F. MUMFORD

NATO,  
1110 Brussels.

This document consists of 110 pages.

N A T O   S E C R E T

(NATO UNCLASSIFIED when separated from attachments)

**NATO SECRET**

DOWNGRADED TO NC

SEE: DN(2005)0002

**220**

**DRC/D(78)2**

**1978**

**DEFENCE**



**PLANNING**

**SYMPOSIUM**

**OBERAMMERGAU, GERMANY**

**JANUARY, 1978**

**PROCEEDINGS**

**NATO SECRET**

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIE - MISE EN LECTURE PUBLIQUE

CONTENTS

Page

Opening Remarks by the Chairman	1
Report to the Defence Planning Committee	2
Conceptual Approach to the NATO Long-Term Defence Programme	5
Ambassador Robert Komer, Department of Defense, Washington, USA	
A NATO Long-Term Defence Programme as a Tool for Defence Planning by SHAPES	15
General Alexander M. Haig, Jr., Supreme Allied Commander Europe	
NATO's Approach to the Establishment of a Long-Term Defence Programme	16
Mr. W.F. Mumford, Assistant Secretary General for Defence Planning and Policy, NATO International Staff	
<u>The Development of the Long-Term Defence Programme</u>	
<u>AIR DEFENCE</u>	
(a) Introduction	25
R/Admiral C.E. Price, SHAPE	
(b) Task Force Methodology	29
Lt.Col. D.M. BROWN SHAPE	
(c) An Operational Concept for Land Based Air Defence in Allied Command Europe	34
R/Admiral C.E. Price, SHAPE	

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIED - MISE EN LECTURE PUBLIQUE



DRC/D(78)2

-ii-

	<u>Page</u>
(d) Required Capabilities for Weapons and Command and Control Air Commodore C. Baas, SHAPE	50
(e) Air Defence Systems Mix Mr. D.A. Facey, NATO International Staff	64
(f) Conclusions and Outlook Rear Admiral C.E. Price, SHAPE	80
United Kingdom Experience with the NATO Long-Term Defence Programme Mr. Michael Quinlan, Deputy Under-Secretary of State for Policy and Programmes, Ministry of Defence, London.	85
Experience gained by NATO Nations with the Application of the Long-Term Defence Program - German Experience Brigadegeneral von Bornstaedt, Assistant Chief of Staff (VI), Armed Forces, Ministry of Defence, Bonn.	93



OPENING REMARKS BY THE CHAIRMAN

It has been our aim in planning the annual NATO Defence Planning Symposium to select a theme of topical interest, closely related to on-going NATO defence planning activities both at the NATO Headquarters and in capitals. The Long Term Defence Programme was the natural choice this year both from the point of view of substance and timing - we are just at the mid-point of the preparations for the Washington Summit at the end of May.

Within a few weeks the reports of the Long Term Defence Programme will be available and all of us here, in one way or another, will be involved in the preparation of the comprehensive report to be submitted first of all to the Defence Ministers and then to Heads of State and Government at the Summit.

We are most fortunate in our speakers who, between them, will be able to address the Long Term Defence Programme in all its major aspects and we are most grateful to them for finding the time to be with us in Oberammergau. Over the next three days, we shall have the opportunity in an informal atmosphere, and both inside and outside the Conference Room, to express our views and voice any concerns we may have about the remaining stages of the Long Term Defence Programme, which, I am sure, we all wish to bring to a most successful conclusion in the Spring.

REPORT TO THE DEFENCE PLANNING COMMITTEE

by the

Chairman of the Symposium

1. The 1978 Defence Planning Symposium was held at Oberammergau on 16th-18th January under the chairmanship of the ASG for Defence Planning and Policy.

2. As in previous years, the Symposium was designed to allow participants to address a major issue of NATO defence planning in an informal and relaxed atmosphere, with the additional advantage that those taking part stayed in hotels in Oberammergau and were able to exchange views both outside as well as inside the conference room. With the endorsement of the Defence Review Committee, this year's Symposium was devoted to the Long-Term Defence Programme. The timing was appropriate - at about the mid-point of the preparations for the Washington Summit - and it brought together senior NATO officers and officials and senior defence planners from national capitals and Delegations.

3. The topicality and major interest of the subject this year attracted participation at a high level, and the Symposium was particularly fortunate in having among the speakers Admiral Kidd, General Haig, Ambassador Komer and Mr. Quinlan (Deputy Under-Secretary MOD, UK). Dr. Stütze (Chief of Planning Staff, MOD Bonn) unfortunately had to withdraw at the last moment but his place was ably filled by General von Bornstaedt (Assistant Chief of Staff, MOD Bonn). Representation from countries included 2- and 3-star officers and civilians.

4. The first day of the Symposium was devoted to the broad aspects of the Long-Term Defence Programme, with addresses from Ambassador Komer, General Haig and Mr. Mumford. The whole of the second day was given over to a highly professional and impressive presentation on the work of the Task Force on Air Defence led by Rear-Admiral Price, the Task Force Director. On the third day we heard about the impact of the Long-Term Defence Programme on national planning from Mr. Quinlan and General von Bornstaedt. The discussion periods proved lively and were used by the participants to air a range of problems in a constructive debate.



DRC/D(78)2

-3-

5. All participants in the Symposium expressed their views on a personal basis and not as representatives of their Authorities. It is not, therefore, the purpose of these gatherings to seek agreement on issues. But it was possible on this occasion to identify from the discussions a broad consensus of views on major aspects of the Long-Term Defence Programme and about its future handling in the run-up to the Washington Summit. There was general acceptance that the Long-Term Defence Programme was building on and was not in conflict with ongoing NATO activities to improve defence capabilities; the special value of the Programme included the engagement of the attention of Heads of State and Government, the early demonstration it had given of the commitment to NATO of the new American Administration and of the corresponding opportunity it provided for a reciprocal response from the other members of the Alliance, and the emphasis it was giving to co-ordinated, co-operative action in the defence field. The initiative provided new opportunities to transform staff plans into public policy and to draw together coherently as in the case of the air defence study a number of previously diverse strands of current activities and generally to increase the momentum of NATO's defence planning.

6. It was recognized that Ministers would be presented with a mixed bag of recommendations, some expensive and some procedural but all important, and that it would be probably necessary to allocate these specific programmes to various categories according to the degree of commitment which it would be desirable to seek at the Summit. The possible nature of the categories and the range of commitments were discussed in some depth. The problem which would arise in seeking to establish priorities was recognized, particularly as between one Task Force and another and between the outcome of the Long-Term Defence Programme as a whole and other demands on defence resources.

7. With regard to implementation machinery, there was a large body of opinion in favour of making the maximum use of existing NATO machinery which, it was felt, in general should be adequate for the task including the provision of the necessary monitoring at a high level; although some strengthening of international agencies might be needed. The Long-Term Defence Programme had in itself carried NATO planning into the long-term in a number of important respects, but there was a broad measure of concurrence that NATO collectively should and could give more help and guidance than at present to national defence planners in considering longer term needs, particularly in the field of operational concepts and the establishment of requirements - and if possible co-ordinated programmes for major equipment replacements.



N A T O   C O N F I D E N T I A L

-4-

DRC/L(78)2

8. The importance to the success of the Long-Term Defence Programme and to NATO's force planning activities in general of the provision of increased real resources for defence was widely supported and it was noted that so far only four NATO countries had indicated their intention to achieve the 3% growth target in defence expenditure. The need for careful PR preparations and handling was also noted.

9. Perhaps the most useful function of the Symposium was as a forum for the exchange of ideas among those, both in NATO capitals and Headquarters, who will be closely involved in the further development and implementation of the Long-Term Defence Programme, together with their other defence responsibilities. The insights gained at Oberammergau should provide a valuable input to the more formal proceedings of the Executive Working Group, the Military Committee and the Defence Planning Committee in the months ahead.

N A T O   C O N F I D E N T I A L

-4-

DOWNGRADED TO NC  
SEE: DN(2005)0002

N A T O   C O N F I D E N T I A L

-5-

DRG/D(78)2

Conceptual Approach to the NATO  
Long-Term Defence Programme

by

Ambassador Robert Komer,  
Department of Defense,  
Washington, USA

N A T O   C O N F I D E N T I A L

-5-

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIE - MISE EN LECTURE PUBLIQUE

INTRODUCTION

I am delighted that the ASG for Defence Planning and Policy, Mr. Mumford, decided to devote this year's symposium to the LTDP. I guess he asked me to lead off because I was the chief architect of the US initiative at the Summit and DPC last May which led to the LTDP. But let me say at the outset that my role is simply that of a staff officer - and expediter - American style. The real movers and shakers are the Major NATO Commanders, Assistant Secretaries General Mumford and Walsh and Defence Ministers in capitals. It is they who are shaping the LTDP and will make it work in the last analysis.

We are now in the last phase of designing an LTDP, an exercise some have called the boldest and most far-reaching NATO has undertaken in many years. At any rate it is certainly stirring up a great deal of activity in NATO Headquarters and in capitals, to the pain of many (including myself). The exercise is also so complex that we are in danger of losing sight of the forest for the trees. So it is useful at this point to step back for a moment and look at the underlying rationale for such an exercise.

1. What led the new US Administration to propose it ?
2. Why is the LTDP so urgent today?
3. How does it differ from previous NATO exercises, and fit into other on-going NATO work ?
4. What results should we collectively seek ?

It seems to me that if we agree on these propositions -- and I suspect we do -- we will also agree why so much of the common defence effort to which we are all dedicated rides on the success of the LTDP -- and why we should try our damndest in the next four months to make it a success.

I. GENESIS OF THE LONG-TERM DEFENCE PROGRAMME (LTDP)

It is always interesting to trace the genesis of a conceptual approach (bearing in mind that bright ideas are cheap, and that until political decisions are made to breathe life into a concept it remains just a bright idea).



N A T O   C C N F I D E N T I A L

DRC/D(78)2

-7-

The idea that NATO needed an LTDP originated in the early 70s thinking of a group of DoD and RAND analysts, all of us old NATO hands. We felt that, while NATO's underlying purpose and strategy remained as valid as ever, its posture to carry out that strategy vis-a-vis the WP was becoming less and less adequate.

Moreover, with the US disengaging from South-East Asia, it could refocus energies on the primacy of Western European defence.

This led to three Rand studies in the period 1973-76, first on Revamping NATO's Defence Posture to Compensate for MBFR; second two released to NATO (Rationalization and AD.80, the latter leading on from AD.70). Seldom have think-tank studies ended up having such policy impact.

Among other things, they influenced the Schlesinger precursor efforts of 1973-74 to generate greater defence cooperation. All these efforts borrowed heavily from ongoing innovative work of new MNCs, such as the splendid flexibility studies.

The next event was the 1976 US election campaign, in which I was asked to write NATO background papers and proposals for the party which won. Then, in January 1977, Secretary Brown asked me to become a consultant and work out what the Carter administration should do for NATO, for presentation to the Allies. Building on my proposed AD.80 concept, I proposed an urgent US action programme designed not only to revamp the US GPF posture to make a more effective contribution to NATO, but also a NATO-wide effort along similar lines, including some short term quick fixes.

These proposals became the US initiatives at the London Summit, where President Carter called for (1) short-term measures; (2) a bold LTDP; and (3) greater cooperation in arms production. We also invited Heads of Government to meet in Washington in the Spring of 1978 to discuss what had been done.

The Heads of Government agreed. Defence Ministers fleshed out further at the May DPC. The rest is history. Ten Task Forces were set up; the MNCs successfully laid on short-term measures, and we are seven months into the design of the LTDP.

N A T O   C O N F I D E N T I A L

-7-

N A T O   C O N F I D E N T I A L

-8-

DRC/D(78)2

II. WHY DID THE US REGARD A NEW NATO INITIATIVE AS SO URGENT ?

My sketch of how the LTDP concept emerged is far less important than why we felt such a major new NATO effort vital for the 80s. The following factors comprised our rationale for why the LTDP was needed:

1. Continued growth of WP capabilities, especially for shorter warning attack.
2. Shift from US nuclear superiority to strategic equivalence, which gave greater importance to conventional balance.
3. Need for more co-operative effort. Though NATO is a classic Alliance of sovereign states, it was clear from its outset that a much greater degree of mutual co-operative effort than ever before in peacetime is vital to credible defence at acceptable cost. So from the beginning NATO was conceived as a co-operative multinational enterprise. Go back and read what Ismay or Eisenhower said in the early days and you will see how far short NATO has fallen of the common early ideas. Though many unprecedented co-operative NATO efforts are ongoing in peacetime, (especially combined command, common air defence programmes, etc.), by and large NATO never followed through on early collective emphasis. This was not too dangerous in the period when an overriding deterrent was provided by US nuclear superiority, but it is very dangerous today.
4. There is an urgent need to face up to the consequences of inevitable resource constraints -- that is, to meet the evolving threat we must use such resources as are available more wisely. Since NATO could not rely on huge budget additions except in a period of emergency, NATO must find other ways to maintain the balance through more efficient resource use.

N A T O   C O N F I D E N T I A L

-8-



DRC/D(78)2

-9-

5. Since NATO forces are also far less well organized to operate together in coalition warfare than WP forces, there is a critical need to improve compatibility and interoperability, if not standardization.
6. NATO needs more adequately to exploit its qualitative advantages, especially in high technology. Because high technology is so expensive, the only way to exploit it optimally is through greater pooling of effort.

The broad consensus in the new US Administration that these considerations argued for a major new attempt to strengthen NATO's defence posture created a receptive atmosphere for my proposals to the Secretary of Defense, and his to the President. And it is precisely to cope with these key factors that we proposed the kind of LTDP that we did last May.

### III. WHAT KIND OF LTDP DID THE US ENVISAGE ?

It was very clear to us that just another AD.70 would not meet the need. Nor would NATO's ongoing force planning process, important as this is. So we felt something dramatic had to be added, if, in the face of growing WP capabilities, NATO really were to achieve credible deterrence/defence in the 80s, at politically affordable cost.

1. We must find ways to overcome that bane of NATO -- reports which say all of the right things (like AD.70 and Basic Issues); lay out broad goals in vague terms and are endorsed by Ministers, but then nothing happens because nations ignore them.
2. So we suggested NATO design a PROGRAMME, not draft a report. It should show quantities, phased national shares, and costs over time to the extent feasible.
3. It should call, when feasible, for national commitment, not just Defence Minister endorsement. (The Summit will help here).



N A T O   C O N F I D E N T I A L

-10-

DRC/D(78)2

4. It should accentuate co-operative efforts (as the 1977 Ministerial Guidance stresses), not just national efforts. Though national programmes remain the primary effort, the LTDP should provide a blueprint for aligning them according to an agreed common framework and agreed priorities, and propose COMMON PROGRAMMES.
5. It should not duplicate force proposals, but complement them by focussing on functional needs more than on forces themselves.
6. It should be long-term, not look just four to five years ahead because many critical programmes, especially in new technology, might take a decade to mature.
7. It should deal with a limited number of key problem areas, instead of trying to cover the waterfront and diluting the focus. It is better to get at least some things done well. So the US proposed nine areas -- NATO added one more.
8. Similarly, it should realistically accentuate the affordable, in the light of inevitable budget constraints. There is no point in blue sky proposals which nations could not accept. Instead need (a) a tougher sense of PRIORITIES; (b) more trade-offs; (c) reduction of waste and duplication inherent in widely varying yet overlapping force postures, unco-ordinated production, training, etc.
9. It should accentuate interoperability, if not standardization where possible, to make NATO forces more capable of integrated yet flexible coalition defence against the much more highly standardized and integrated WP. We Americans decided to push this via buying more European equipment and sharing more of our technology. We see the LTDP as providing the framework for a better two-way street which we recognize is needed.

N A T O   C O N F I D E N T I A L

-10-

DRC/D(73)2

-11-

10. Last but not least, we should focus not just on what to do but how to do it -- on revamping NATO's machinery to enable it to effectively follow through and execute the programmes agreed. NATO as an Alliance has been a great success, but I do not see how any disinterested observer could deny that NATO as an INSTITUTION designed to maximize mutual defence collaboration has not lived up to its early promise. This is no reflection on the MNCs but let's face it, they and the NATO bureaucracy have got responsibility but VERY LITTLE AUTHORITY.

Doing all the above is a tall order, coming on top of NATO's regular planning cycle. I realize it's been a burden on everybody. But the real question is -- could we change the stripes of the NATO problem by a lesser effort? Isn't a bold LTDP encompassing a whole new dimension of Alliance co-operation essential to meet the need?

On the other hand, the LTDP is not all that new. For the most part, it simply builds on and pulls together a great deal of innovative work by MNCs and nations. I already mentioned flexibility studies. Another source is the on-going Tri-MNC Reinforcement study, SHAPE and ACLANT C<sup>3</sup> analyses, and the like. There is not much in the LTDP as it is emerging that has not been suggested, or even tried, more than once before. So we see the LTDP more as a management approach for taking many of the key NATO requirements already fleshed out and analyzed -- and pulling them together in a coherent framework so that nations can see clearly just what is needed -- and hopefully commit themselves to respond.

#### IV. WHAT RESULTS MUST WE COLLECTIVELY SEEK ?

Let me turn now to what we Americans call the bottom line, what outcome can we realistically seek? Except for SACEUR and SACLANT, most of us here (myself included) are not decisionmakers but senior officials and staff officers. It is our job to make sure that our principals see not only the risks and obstacles but the opportunities the LTDP provides.



N A T O   C O N F I D E N T I A L

-12-

DRC/D(78)2

1. Above all, we want an LTDP, blessed by the Summit, which will give the new impetus and coherence to NATO deterrence/defence in the 80s which the evolving threat demands. Does anyone here really believe that we could have got this impetus solely through the normal NATO planning process? If they do, they misread NATO's history, which clearly shows that only extraordinary out-of-cycle efforts have ever generated exceptional results.
2. We are entitled to expect an LTDP which marks a new high level of genuine Alliance Co-operation, instead of the lip service this usually gets. If both resource constraints and the need for a greater degree of Standardization/Interoperability dictate greater efficiency and commonality in our joint resource use, the LTDP can be the vehicle for generating it -- in C<sup>3</sup> and Logistics above all.
3. The LTDP should also result in a significant strengthening of NATO's multinational machinery -- civilian as well as military. We need to give more authority to the MNCs in peacetime if they are to function effectively in wartime, especially against short warning attack.
4. But let's be realistic in our expectations. Not everything that nations propose will be accepted by the Task Forces, not everything the Task Forces propose will be accepted by the Executive Working Group or the Permanent Representatives, and not everything NATO then proposes will be accepted by Defence Ministers and Heads of Government. When we add up the total bill, for example, some things may have to give. I am confident that we can, however, get concrete forward movement on at least some main action areas in each Task Force, which would by itself be a major breakthrough.

N A T O   C O N F I D E N T I A L

-12-



DRC/D(78)2

-13-

5. Moreover, let's not just give up on those key proposals which, for one reason or another, may not be fully approved. Acceptable compromise may be feasible in some cases -- halfway measures are better than none. Some measures unacceptable in the short-term may be acceptable if put in the longer-term category. And some can be remanded for further work and report back to Ministers later.

### CONCLUSIONS

I have tried to lay out what lay behind our new NATO initiatives -- why we launched them when and how we did. They have now been NATO-ized, and are in the hands of NATO institutions which will soon present them for review by governments. We Americans are making out input just like everyone else (or perhaps more so because we are bigger), but it's now a common endeavour which will stand or fall on what you (as well as we) do. That's why this symposium will be a great success if it gives new clarity and emphasis to the design of a bold LTDP.

So let me end with an appeal to all of you. I daresay we all start from a basic unanimity about the serious threat from the growing WP capabilities, and the need for a greater defensive response. Defence Ministers themselves keep saying this. So do the NATO Military Authorities.

But as always the real question is: How to get done what we all agree needs to be done ! Rhetoric is no substitute for action. Words are of limited deterrent value. Money is scarce to meet all our needs, even if we do get 3% real growth from all the Allies.

The LTDP we are jointly designing may not be the perfect solution. Like everything we try to do collectively in NATO, it entails, and will entail, many compromises.

But let's not forget that the LTDP represents by far the best opportunity yet available to get what I suspect we would all agree is needed (even though some may be more sceptical than others about the prospects of achieving it). An enormous amount of effort is going into this new programme (not least from those here today). Hence we owe it to ourselves to try and pilot it through successfully.

N A T O   C O N F I D E N T I A L

-14-

DRC/D(VE)2

I want to speak frankly about another salient fact on which all our Allies should capitalize. You know as well as I that national parochialism is the enemy of effective Alliance defence, and we Americans have been the worst offenders. But have you noticed a major shift in the US attitude? From being the greatest unilateralists of them all, we have suddenly become the high priests of multilateralism. With all the fervor of the newly converted we now "think NATO", no longer so unilaterally -- and gear our programmes more to those of our Allies. We are releasing a lot more technology, seeking joint development projects, proposing many other common endeavours.

Despite your justifiable scepticism, we are even determined to create more of a two-way street in defence procurement (though there have been few results as yet). We are offering co-operation without high charges for licensing, etc. But the big question in our minds is, will you Allies join us, even if you find us a bit naive? Are you, too, able to gear up to greater defence co-operation in the common interest, or will the US end up flailing around alone?

Here let me remind you of another iron law of NATO politics. We Americans have traditionally been the greatest isolationists as well as the greatest unilateralists in NATO. Every decade or so we sally forth, usually late, to save old tired Europe, but then we tend to retreat back to our own concerns (bringing home our troops from Europe is a recurrent theme -- even Eisenhower was infected).

So once again a new energetic US Administration is sallying forth to rescue NATO. In fact we are doing proportionally more to strengthen our NATO contribution than any of you. But our ability to sustain this impulse, by carrying Congress and the public with us, will depend heavily on whether we can demonstrate convincingly to them that Europe is doing it's share too.

Ergo, here is a final reason why the LTDP is so important: It is our answer to our own sceptics back home.

Lastly, I would also remind you that we have engineered what may be a one-time opportunity via Summitry. Heads of Government launched this effort, not just Defence Ministers, and we can hope to commit them personally to our efforts in the Spring. If so, the LTDP may just have a greater chance of producing the desired results than anything before. It's an opportunity we should not miss.

N A T O   C O N F I D E N T I A L

-14-



DOWNGRADED TO NC  
SEE: DN(2005)0002

N A T O   U N C L A S S I F I E D

-15-

DRC/D(78)2

A NATO Long-Term Defence Programme as a  
Tool for Defence Planning by SHAPE

by

General Alexander M. Haig, Jr.,  
Supreme Allied Commander Europe

The text of this presentation was not  
available at the time of publication.

N A T O   U N C L A S S I F I E D

-15-

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIE - MISE EN LECTURE PUBLIQUE



N A T O   C O N F I D E N T I A L

-16-

DRC/D(7S)2

NATO's Approach to the Establishment of a  
Long-Term Defence Programme

by

Mr. W.F. Mumford,  
Assistant Secretary General for  
Defence Planning and Policy,  
NATO International Staff

N A T O   C O N F I D E N T I A L

-16-

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIE - MISE EN LECTURE PUBLIQUE

N A T O   C O N F I D E N T I A L

-17-

DRG/D(78)2

We have heard this morning from Ambassador Komer about the development of the Long Term Defence Programme from the time when it was merely a gleam in his eye as he sat pondering in the Rand Institute to its emergence as a lusty infant in Brussels. We have also heard from him his ideas about its further growth and development, passing through adolescence to maturity. General Haig has placed the programme firmly in the context of ongoing work in SHAPE and more widely in NATO as a whole to improve NATO defence capabilities, and from the point of view, in particular, of its potential contribution to the achievement of the objectives of the Major NATO Commanders.

For my part I would like to review the Long Term Defence Programme from a strictly practical standpoint, as a NATO official concerned with pulling the various threads together in the preparation of the draft comprehensive report for Ministers and for relating the outcome of the exercise to NATO's other current defence planning activities. No-one would dispute the importance of an outstanding success at the Washington Summit. This is important for political as well as military reasons. But I hope that we would also all subscribe the need to ensure that, from the defence point of view, the outcome is a sensible one. We do not want to rush into the wrong decisions under time pressure.

I propose, therefore, to review the task before NATO in the run-up to the Washington Summit; to consider the nature of the programmes; to assess the degree of commitment to the programmes to be sought from Heads of State and Government; to consider what the arrangements might be to follow up what will emerge from the Summit; and finally to give some of my own ideas on NATO's future needs for coordinated long term planning in defence field.

I should make an important qualification, we are still six weeks off D (for delivery) Day for the Task Force Directors' reports. Until we have them to study, much of our discussion here about handling them must be hypothetical.

I am deeply conscious that between now and April 18, which is the date by which the Executive Working Group should have completed a report on the Long Term Defence Programme and forwarded it to the Defence Planning Committee in Permanent Session and to the Military Committee, we have only 52 NATO

N A T O   C O N F I D E N T I A L

-17-



N A T O    C O N F I D E N T I A LDRC/D(78)2

-18-

working days remaining; in this calculation I have not taken account of all the national religious and other festivals. In this period too, some of us will find themselves engaged in HILEX-8 (5 days), the Nuclear Planning Group meeting in Denmark (4 days) and at the same time, the Military Committee and the Defence Review Committee will be heavily engaged in preparing for the Defence Ministers when they meet on May 18/19, force goals for the period 1979-1984 to be developed from the 1300 force proposals of the Major NATO Commanders now before the Military Committee. Undoubtedly we can all look forward to a busy next few months.

We can already be sure that Ministers will have before them a mixed bag of recommended programmes. Some will be procedural but that will not necessarily mean that they will be easy. Task Force 8 on rationalisation - the harmonisation of national armaments programmes - will be concerned with procedure but in a field bedevilled over the years by the demands of national sovereignty and by intractable national industrial and employment requirements. Others will be no cost/low cost but with thorny political, legal and constitutional ramifications (I have in mind here proposals to improve NATO's coordinated response to a crisis related to the early stages of the NATO Alert System). Even outside the field of arms procurement, we must expect programmes with major price tags attached - new and more extensive equipment programmes for reserve forces; modification of wide-bodied civil aircraft to take heavy military loads (who pays and compensates the airlines for loss of revenue while the work is being carried out?); or modification of merchant ships to provide a refuelling capability in support of naval vessels. And then there will be the hard core of hardware - based programmes which will call for greater standardisation and interoperability between replacement weapons systems already planned or funded, for the development and production of families of weapons, and even for whole new generations of equipment. Some may involve new ventures in common funding or extensions of existing infrastructure arrangements (examples, the development of a family of maritime mines for use by all nations; replacement of ground environment radars (size of the bill?); procurement of a NATO computer assisted message processing system and (very much long term) a standardised Tactical Trunk Network in Allied Command Europe). Other programmes may call for an entirely novel approach to the support of NATO front-line forces (proposals for cooperative funding of war reserve stocks on a regional basis). I would expect to see these various categories of programmes arriving in both the medium and long term.

N A T O    C O N F I D E N T I A L

-18-



N A T O   C O N F I D E N T I A L

-19-

DRC/D(73)2

It is the essence of the LTDP that it should break new ground, challenge existing conventions; in fact have a shock effect. All international organisations need an injection of adrenalin from time to time. We can assume a large fund of political resolve to bring about a successful outcome and the success of short term measures has shown what can be achieved by an injection of political will at the highest level. But we must also be realistic. All the national leaders will be subject in one way or another to constitutional constraints. All of them will be faced with the problem of taking on new commitments - and long term commitments - of national resources to defence which politically in recent years has not been the most popular candidate for public expenditure.

In considering the nature of the commitment which should be sought from allied leaders, it is instructive to examine - but not necessarily be determined by - various kinds of commitment to NATO's coordinated defence activities which already exist. Let us look first at the commitments under NATO current force planning cycle. The only firm commitment of forces to NATO is for the first year of the NATO 5-year plan, which is adopted each year in December by Defence Ministers in the DPC. This is the nearest that countries get to a formal international obligation, where they can be required to account for any back-sliding.

The NATO Force Goals, which are projected 5 years ahead and which are updated every 2 years, are adopted by the Defence Planning Committee and sent to the member countries with the invitation that they should be implemented. The force goals now being developed for 1984 will cover the whole spectrum of NATO's military needs in the shorter term. They have been prepared in very close consultation with national authorities, have been most carefully costed and, under the established force planning procedures, the DRC will make an assessment of the ability of each country, in the light of economic forecasts, to meet the modest challenge posed by the force proposals. But countries do not commit themselves formally to the force goals that are addressed to them individually and this is despite the careful way in which the force goals are prepared in full consultation with national authorities.

N A T O   C O N F I D E N T I A L

-19-



N A T O   C O N F I D E N T I A L

DRC/D(78)2

-20-

Nevertheless, and I think there is a lesson to be learnt here for the LTDP, the performance of countries each year under the NATO Annual Review is measured against the yardstick of the force goals and countries are prepared to submit themselves willingly to this kind of measurement and scrutiny, thus implying at least a moral commitment to the force goals.

From the management angle, I am sure that we should strive for the maximum reconciliation between the term programme which will emerge from the LTDP and the 1984 force goals and this marriage should come about quite naturally bearing in mind that many of the same staffs are engaged on both exercises. In fact, a large number of the 1985 force proposals have already been identified as applicable to the LTDP as shown in my first slide. The figures relate to Allied Command Europe only. The numbers are greater if SACLANT and CINCHAN are added.

We may also look for instruction at the commitments involved in other multilateral endeavours such as NATO-wide commonly funded projects (NATO Infrastructure) and multi-national co-production such as the F.16 and Tornado. Up till now, NATO common funding under which Military facilities for common use are funded under cost-sharing formulae has hardly impinged on national defence budgets. As my next slide shows, the total of NATO commonly funded expenditure expressed as a percentage of total defence expenditures for NATO countries was in 1976 only about 1/3 of 1%. Even if AVACS expenditure is added at a peak annual figure of \$600 million in any year, the percentage would rise only to just over 0.6 of 1%. I would conclude, therefore, that there is scope at least in budgetary terms for increasing the scope of NATO common-funding. But when we try to assess the chances that Allied Governments will be prepared in May to agree there and then to significant increases, time lags in the past to reach decisions on major new projects must be recalled. Take the NATO Air Defence Ground Environment scheme. First ideas 1959. System definition and requirement 1960. Contracts let 1963/64. AVACS has been under intensive discussion and international negotiation at the highest level in NATO for two years. Would anyone here like to predict when a NATO decision to adopt a common funded scheme based on the Boeing will be reached? Similarly multi-national schemes have been slow to reach decisions; the time needed to reach the point of inter-governmental agreement to proceed has in the past taken years not months. The bringing of these projects to fruition has in the past called for careful and patient negotiation.

N A T O   C O N F I D E N T I A L

-20-



N A T O   C O N F I D E N T I A L

-21-

DRG/D(78)2

What then can we reasonably hope for in terms of commitment at the Washington Summit? Since the recommended programmes will be a mixed bag, some procedural, some hardware orientated, some medium and some long term, some no/low cost and some very high cost, a carte blanche approval including such national commitment to provide national inputs will probably not be forthcoming.

The general aim should be to obtain the maximum commitments from Governments and thereby exploit to the full the engagement of the Heads of State and Government. However, the degree of commitment the programmes will attract must be expected to vary. A number of programmes should be ripe for immediate firm commitment and this category should not be limited only to procedural and no cost/low cost programmes; some hardware-orientated programmes, probably those directed at the shorter term, should also be included. Under this degree of commitment the national leaders would undertake, so long as they were in the position to deliver the goods, to incorporate the programmes in their own national programmes and to issue instructions to their national defence and financial authorities that they should work for the achievement of the programmes. This level of commitment would also require a firm engagement at the Summit to provide any necessary additional contributions, identified in the programmes, that might be needed for commonly funded projects.

The second category, in which a majority of the hardware-based programmes might fall, might be one under which the programmes were endorsed collectively by Ministers as those required by NATO as a whole (or regionally) to enhance capabilities in the selected fields, together with agreement that detailed negotiations should start - or be continued if appropriate - to implement the programmes, e.g. the development of joint weapons or families of weapons. This could be accompanied by instructions to the NATO permanent bodies to follow up vigorously any proposal for new commonly funded projects of the AWACS type and new major candidates for NATO infrastructure funding. Time-frames should be established for reaching firm decisions for implementation and there should be provision for monitoring at Ministerial level.

The third degree of commitment could embrace recommendations which by the Summit will not be ripe for decision under either of the first two categories, i.e. those where more study is required both within the NATO machinery and in capitals. Here too special instructions should be endorsed by Allied leaders to ensure the follow-up and time-frames should be established, probably of a longer period than the second category, for the translation of studies into recommended programmes for action.

N A T O   C O N F I D E N T I A L

-21-



N A T O   C O N F I D E N T I A L

DPC/D(78)2

-22-

As in all defence planning, as General Haig reminded us this morning so forcibly, we can never escape from the resource implications; and the degree of commitment which the programmes will attract will turn to a large extent - and this applies particularly to the hardware orientated programmes - on national assessments of their impact on resources. In the light of the Ministerial guidance for 1977, we shall be doing very well if all the nations achieve the target of a 3% real increase in defence spending over the medium period and are able to sustain that rate of growth into the longer term. The current position on the achievement of the 3% target is shown on my next slide. Since the slide was prepared, the United Kingdom Government has announced its plans to achieve a 3% growth in 1979/80 and 1980/81. In the medium term, the 1984 force proposals will be making their own strong bid for the 3% growth in national defence resources.

I observe in passing that, beyond the medium term, cost information for long term defence plans will inevitably become less firm and NATO will not be in a position to judge the impact of recommended programmes on national defence budgets in the same way as we do under the 5-year NATO force goals. We simply do not and cannot expect to have the necessary information available. In response to the 1977 Annual Review Questionnaire, only 5 countries provided forward financial projections for the full 5 years requested; 1 gave information for only 4 years; 2 countries gave information for only three years, and two countries for only the coming year, 1978. In some cases the information was just not available in capitals and in others, for one reason or another, national authorities did not wish to declare their tentative plans to NATO. Indeed only countries themselves, and then only those which have already developed a sophisticated long term defence apparatus, will be in a position to judge the impact of a national input required from them to a NATO long term plan on their planned national allocations of the resources they expect to become available for defence.

Now for the question of follow-up action. General Haig has argued that the emphasis should be placed on allocating action wherever possible to an existing and well tried piece of NATO machinery. One problem will be that what will emerge from the Summit may be a mixture of programmes with various degrees of national commitment to them and in various stages of ripeness for immediate executive action. We shall want to proceed to follow-up action swiftly, so that we benefit from the momentum of the Summit. We shall not, I suggest, want to take up time and energy debating follow-up procedures.

N A T O   C O N F I D E N T I A L

-22-



N A T O   C O N F I D E N T I A L

-23-

DRC/D(78)2

The Task Forces are already charged with identifying obstacles in the path of implementation and we shall want to try to remove these. In the case of hardware-based programmes there will inevitably be in many cases the need for further study and negotiations. But in this area we should look for the possibility of establishing programme offices under the AWACS model representing the various agencies concerned and probably under the supervision of the ASG for Defence Support. Some programmes will naturally fall to existing NATO committees and I have in mind in particular those which emerged from Task Force 2 on Reinforcement requiring various action in the field of NATO's civil emergency planning. In others the lead would fall naturally to the NATO Military Authorities as the coordinating agency and I have in mind here many of the Readiness proposals. Other programmes could be readily added to the responsibilities of such bodies as NICSMA.

But it will also be necessary to consider arrangements for monitoring the progress achieved in each of the programmes and my view here would be that the Executive Working Group, operating below the level of the Defence Planning Committee and the Military Committee, could indeed have a continuing role to play, exploiting its assets as a high level group, which can be readily reinforced from capitals and which brings together, under the chairmanship of the Deputy Secretary General, all the NATO agencies who will be concerned in one way or another with aspects of follow-up action.

We can also consider whether the NATO Annual Review could take on board under its detailed and searching process of annual scrutiny long term plans which concern specifically commitments of forces and major improvement programmes. The Annual Review has proved, both to be an effective instrument which achieves results. It is also flexible in its scope.

I too would not in general be in favour of keeping the Task Forces in being after the Washington Summit, although this is not to say that NATO may not wish from time to time to have recourse to the task force concept of doing business. But its effectiveness is related to its ad hoc character and the moment a task force becomes part of the normal machinery the dramatic impact is lost.

While the outcome of the Washington Summit will in itself commit NATO to much more co-ordinated action reaching out in to the long term than ever before, the question of the practical follow-up to that programme can be separated from that of what if any permanent and new long term planning mechanisms are needed by NATO. I do not propose here to suggest a blueprint or major structural changes. I will confine myself to defining what I see as the requirement for NATO.

N A T O   C O N F I D E N T I A L

-23-



DRC/D(78)2

-24-

I do not feel that NATO can realistically engage on a 10-12 year basis in long term resource allocations on a global basis. As I have already explained it is difficult enough to conduct a NATO scrutiny and assessment of national plans over a 5-year period. We all know that even in national defence planning, with all the information available on the national plain, planning beyond 5 years becomes rather vague and shadowy. We must also not forget that NATO is still composed of 15 sovereign nations and is likely to remain so in the foreseeable future. The Secretary General is not the NATO Prime Minister or even the NATO Minister of Defence and there is no NATO global defence budget to be disposed of in an orderly way.

I see a continuing need for five year projection of force goals, as the essential underpinning of national plans. But NATO should also be in a position to give greater help than it does at the moment to national planning beyond the medium term. I feel that NATO could, for example, help with longer term - and agreed - projections of the threat; with the development of agreed NATO operational concepts to which national planning can be geared; and in particular with the co-ordination of major equipment replacement cycles, i.e. the whole field covered by Task Force 8. Guidance from NATO in these fields would not necessarily call for major structural changes although it would require existing committees and agencies - and in particular the Major NATO Commanders to become engaged more than they do at present in longer term projections.

One idea that has been explored is the establishment of a small cell in NATO which would perform the classic think-tank or gadfly role of looking from a detached point of view, at NATO's various co-ordinated defence planning activities and assessing whether they are operating sufficiently in the long term. The cell should be international, representing the various NATO agencies including the Major NATO Commanders and could be required to produce periodic reports on its activities.

That ends my address. As I stressed from the outset, I have concentrated on the practical aspects and I have tried to identify those that I think we can usefully face up to during our informal discussion here.

N A T O   C O N F I D E N T I A L

-25-

DRC/D(76)2

The Development of the Long-Term Defence  
Programme AIR DEFENCE

Introduction

by

Rear Admiral C.E. Price,  
SHAPE

N A T O   C O N F I D E N T I A L

-25-



N A T O   C O N F I D E N T I A L

-26-

DRC/L(78)2

First let me say how much Task Force 5 appreciates having the opportunity of presenting some of its work within the long term defence programme to an audience such as this. It is my hope that today may be very much a two-way street in that not only can we try and illustrate to you some of the problems we have encountered in developing our air defence programme but that, in turn, we would benefit from your comment and discussion.

I would emphasise that the work of the Task Force is by no means complete and we will not be submitting our report until 1st March. For that reason we are obviously not in a position today to present to you a long term air defence programme with details of the contribution we will be proposing that each nation should make. That will have to wait until the final report. Instead, we have selected some major areas in our work which, I hope, will highlight some basic aspects of long term planning as they relate to air defence; and I would add that at this stage we have a lot of refining to do. And in some areas you will be presented with bones that have yet to be fleshed out and where necessary detail is somewhat lacking; but you will appreciate that time has not been on our side.

Indeed, we are attempting to cover a vast amount of ground in a very short space of time and we have had to make use, to the greatest possible extent, of work that had already been carried out, both nationally and within NATO, into the various fields of Air Defence. But one aspect where we could find little evidence of supporting rationale was in the determination of optimum mixes of the various components. This was particularly so with regard to the weapon system mix of fighters and SAMs, and to the surveillance mix of active and passive sensors. There was obviously no time available to carry out computer studies or war games or even to try and determine the sensitivity of some of the issues involved. We therefore resorted to discussion with experts, both international and national to increase our own background knowledge and expertise and then derived the mixes for each region by applying subjective, military judgement. You will be hearing in subsequent presentations some of the results of this process and how they relate to the final programme.

Which leads me to the timeframe of our work. It has become very apparent to us that, to be realistic, it is not practicable, feasible, indeed it would be impertinent for us, to attempt to change the course of existing major national and NATO programmes to any real degree in the shorter term;

N A T O   C O N F I D E N T I A L

-26-



MAC/D(78)2

-27-

and by that I mean probably into the early eighties. That is not to say, however, that in the shorter term we will not propose measures to increase our capability; but these, in general, will be low cost and will involve such aspects as procedures and doctrines and will in no way be at the expense of well defined and well established programmes. But today we will be concentrating on the longer term, for there we do see the possibility of being able to influence the nations by virtue of an integrated approach, ACE wide, towards improving our overall capability in Air Defence; and very much in the forefront of our minds, and of overriding importance, is the fact that the ensuing individual sub-programmes must be seen to be realistic by those to whom they are addressed. They must be realistic in terms of clearly demonstrating military and political sense; they must be realistic in terms of showing that they can be contained within a budget ceiling which there is good reason to suppose will be made available by the nations for Air Defence. While we recognise that there is a goal, agreed by the nations to increase their defence spending by up to 3%, we plan in our final report to provide several programme options. The first programme will lie within the budget that is currently planned by nations for Air Defence; other alternative options will, I hope, demonstrate what additional capability can be provided by modest increases in cost.

And to digress for a moment we are, at this stage, missing essential details of planned national expenditure in the longer term which some nations have not seemed able to provide; and I say that while fully appreciating their difficulties; but it almost goes without saying that any long term planning must be carried out within the framework of a realistic budget. Without that framework I will have to resort, in some cases, to extrapolation, and even guesswork, with the obvious danger of reduced credibility in the end product. I mention that here as one important aspect that has to be reckoned with in attempting centralised planning.

So now to the bill of fare for today. We propose to present you with five courses. First, in a fairly light hors d'oeuvre, a brief outline of the approach we adopted within the task force to develop our programme. Next, a full bodied potage, with a discussion of the threat and the associated operational concept for Air Defence in ACE. This is designed to provide an overall framework or, in gastronomical terms, to put a lining on the stomach. Next to the poisson, where



N A T O   C O N F I D E N T I A L

-28-

ERC/L(73)2

we discuss the capabilities required in the main components of the Air Defence system. The entree follows, with some rare meat where we present our Air Defence system mixes and outline some of the difficulties involved in developing them into a final programme. And finally, the entremets, or the sticky sweet, where I will outline our way ahead, including some personal thoughts on long term planning.

I hope, Gentlemen, that you enjoy your day and I look forward to you providing the cigars, coffee and liqueurs to end this bill of fare in your comment and discussion.

N A T O   C O N F I D E N T I A L

-28-

DOWNGRADED TO NC  
SEE: DN(2005)0002

N A T O   R E S T R I C T E D

-29-

IRC/D(78)2

The Development of the Long-Term Defence  
Programme AIR DEFENCE

Task Force Methodology

by

Lt.Col. D.M. Brown  
SHAPE

N A T O   R E S T R I C T E D

-29-

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIED - MISE EN LECTURE PUBLIQUE



N A T O   R E S T R I C T E D

-30-

LRC/D(78)2

In the next minutes I will outline the methodology used by Task Force 5 in developing its programme. I do not believe that it is necessary to spend any time on the background of the long term defence programme itself and its associated task forces, since I feel sure that you are all familiar with that subject. I do, however, believe that it would be useful to take a moment to discuss air defence planning as it existed prior to the advent of the LTDP since that environment was a factor in selecting the methodology used by task force 5. The three sources of air defence planning which existed within the Alliance, before May 1977 are shown on this slide.

Nations have retained responsibility for equipping their forces so obviously a great amount of planning is devoted to weapons systems acquisition. Several nations have also planned or are now planning national command and control and national communications systems. The degree to which these national planning activities are coordinated with NATO varies. Force goals and proposals are one way in which NATO attempts to influence the short term planning of nations: Unfortunately, we do not have a similar means of coordinating national long term planning.

Multinational planning takes several forms: one function of the CNAD and its subordinate groups is to encourage multi-national cooperation for equipment acquisition. There is also cooperation on a multi-national or bilateral basis outside the CNAD framework with little reference to NATO channels, witness the F-16 and Tornado.

Finally, MC 54/1 gives SACEUR certain air defence planning responsibilities, and even though this document mentions an overall air defence planning responsibility, in practice SACEUR's air defence planning is for the most part limited to commonly funded infrastructure programmes such as the NALGE.

The resulting fragmentation in air defence planning is understandable since nations retain the responsibility for acquiring and maintaining weapons systems - at the same time, under 54/1 NATO military commanders have operational command and control of the Alliance's air defence forces. Therefore nations tend to concentrate on weapons systems while the NATO focuses on command and control. This fragmentation potentially has its most negative impact on elements such as command and control and communications for which both the nations and NATO have a planning responsibility.

N A T O   R E S T R I C T E D

-30-



N A T O R E S T R I C T E DDRC/L(78)2

-31-

This situation led us to an early conclusion that due to the uniquely integrated nature of the air defence system the task force could not afford to focus on improvements in a few high priority items as other task forces were being urged to do. Consequently the task force 5 approach has been to look at the complete spectrum of the air defence system, bearing in mind also that the air defence ground environment now has an expanded scope and includes responsibility for C<sup>3</sup> of all tactical air assets, offensive defensive and support. This need to look at all aspects of air defence and develop a balanced programme has had a direct bearing on both the TF 5 organization and its method of work.

This slide shows the organization of the task force and lists the functional responsibilities of each of the seven task groups which together encompass all the major aspects of air defence. Of course, the work of task group 1 preceded that of the other task groups since it provides the basic framework for the work of the other groups. The key elements of the operational concept will be discussed by Adm. Price in the next presentation. As a preface, I would like to emphasize that our basic methodology is not terribly complicated. Explained in the simplest of terms, it involves comparing what has been planned by the nations with what we considered was necessary and thus establishing shortfalls which represent additions to national programmes. These additions inevitably involve compensating reductions and hence, in the final stage of arriving at an overall programme, there is the need to make adjustments by modifying priorities and possibly changing the phasing of various system acquisitions.

How this general plan of work was specifically applied to the task force will be explained by describing the intermediate stages through which our final programme has progressed. The first of these intermediate stages is an objective force mix. We use this term to refer to the numbers of generic system in broad categories such as SAM, fighters, Sensor and C<sup>3</sup> systems required to provide the near optimum air defence capability for ACE. The numbers derived are based on the threat and our air defence. The operational concept through the systematic application of military judgement tempered by the technology expected, with high confidence, to be available in the 80s and 90s, our data collection efforts have been concentrated in two areas first on developing the currently planned future posture which is simply the summation of various NATO and national plans. Again expressed in numbers of systems. Second on developing a profile of the nation's air defence spending intentions into the 90s. National cooperation in data collection has been mixed. Some nations have responded 100% others at about the 50% level while still others have provided very little information.

N A T O R E S T R I C T E D

-31-



N A T O   R E S T R I C T E D

-32-

DRC/D(73)2

The shortfalls are self-explanatory, they are generated from a comparison of the objective force mix and the currently planned future posture and reflect the air defence needs of the Alliance which will not be met with existing plans. We have interesting enough found the occasional surplus that is a nation which was planning to do more than we thought necessary in a particular area. The next step in the methodology is the development of the objective programme. The objective programme and this is a term which you will hear several times today is a combination of the currently planned future posture and the additions needed to fill the identified shortfalls. It is still basically a military assessment using the operational concept as a guide. The difference is that it is defined in terms of specific systems and includes costing and therefore represents costed hardware programmes.

But I would like to stress that it must not be in any way taken as our final proposed programme. It is simply one step towards it which establishes the military needs and the military needs only, to counter the threat. It has not taken into account the limitation imposed by nations budget ceiling. Thus we fully realize that the cost of such a programme is likely to be greater than the combined spending projections of the nations determined from our data collection efforts. Following a comparison to determine the size of this difference, the task force enters the last and most difficult phase of its methodology, that of developing a final programme of force mix options which cannot be an unconstrained shopping list. Put another way, the purpose of this last phase is to adjust or scale down the objective programme until it meets our target budget. To accomplish this task we have called upon the experience gained in developing the objective force mix to analyse the interaction between the various air defence sub-systems, assess the potential trade-offs available and finally determine the extent to which phasing of the acquisition of the systems in question can level some of the expected peaks in expenditures, but always attempting to maintain a balanced air defence system as defined in the operational concept. The end result will be a basic programme which clearly identifies the air defence planning options available to national defence staffs. We will also outline the incremental capability which could be achieved through modest increases of defence spending in real terms.

N A T O   R E S T R I C T E D

-32-

MAC/L(78)2

-33-

Our presentation today will only take you to the objective programme step. That is the basically unconstrained programme which represents our military assessment of the Alliance's air defence needs.

We are however currently engaged in making the difficult decisions necessary to transform our objective programme into a realistic affordable air defence programme. Gentlemen, this briefly summarizes our method or work. We readily admit that the methodology used on the task force is not unique and there are other ways in which we could have approached our task. Our methodology does, however, permit us to look at the complete scope of air defence and for one of the few times in the history of the Alliance all of the elements of air defence have been examined in concert as parts of an overall system.

Gentlemen, this concludes my presentation. Next Admiral Price will discuss the threat and operational concept.



1

DOWNGRADED TO NC

SEE: DN(2005)0002

N A T O   S E C R E T

-34-

DRC/D(78)2

The Development of the Long-Term Defence  
Programme AIR DEFENCE

An Operational Concept for Land Based Air Defence  
in Allied Command Europe

by

R/Admiral C.E. Price,  
SHAPE

N A T O   S E C R E T

-34-

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIE - MISE EN LECTURE PUBLIQUE

In the space of some thirty-five minutes, I plan to discuss with you the development of an operational concept for land based air defence in Allied Command Europe. But perhaps before I start, it would be as well to set the scene by briefly explaining the object of such a concept and the part that it plays in the development of an overall programme, both for the short term and for the longer term into the 1990's. In simple terms, it is aimed at providing a basic framework within which a detailed programme could be developed which would ensure a balanced and coordinated phase-in and build-up of the future air defence posture in ACE. As the work of Task Force 5 has progressed, the value of the preliminary work carried out in developing this concept has become more and more evident, particularly in establishing a clear picture of the relative emphasis of each interrelated part.

So this morning I propose to present that framework to you, in the following parts.

- First a brief introduction, then
- a discussion of the threat followed by
- some conceptual considerations in the transition from peace to war; then
- a brief review of the interrelation between offensive and defensive counter-air operations
- and finally, a conceptual discussion of the ACE air defence system itself for the eighties and nineties.

SACEUR's air defence responsibilities are clearly and precisely laid down in MC 54-1, namely: to preserve the integrity of NATO European Airspace in peace; and defend it against air attacks in war. There are many major factors affecting this uniquely important mission: The Warsaw Pact air threat, NATO air defence assets, strategy, doctrine, tactics and technology; all these are interrelated and are subject to a process of change over time. Accordingly, all must be maintained under continuous review in order to maintain the viability of ACE air defence.



In peacetime situations, SACEUR's responsibilities are essentially those of classical air defence. With the transition to war, however, these responsibilities expand immediately to the much broader and more demanding air superiority mission. The significant differences between a peacetime air defence posture and the all embracing wartime mission will have major impacts upon the various elements of the future air defence system in terms of the characteristics of its components, its deployment plans, its force employment and its related command and control system. Furthermore the associated concept of operations must contain provisions for dealing both with contingencies and with the critically important transition from peace to war. I will return to this point later.

Perhaps the major factor, and one that must be given important if not over-riding consideration is the Warsaw Pact air threat. It sets the scene and provides a backdrop against which the whole concept must be viewed and developed. But for the purpose of this presentation I will only highlight its main features.

Throughout the past two decades, Warsaw Pact tactical aircraft have suffered limitations in restricted range, small weapon loads and relatively elementary navigation and weapon delivery equipment. These limitations, together with an air defence orientated doctrine, generally restricted their activities to close support of ground forces and short range interdiction, carried out mainly at medium altitudes. However, the later generations of Soviet aircraft being introduced into Warsaw Pact inventories are significantly changing that situation. In general,

- tactical aircraft ranges have doubled and can be further increased by developing air refuelling capabilities;
- weapon payloads, which could include chemical and biological weapons, have tripled;
- increasingly sophisticated all weather navigation and weapon delivery equipment is being installed;
- the initial generation of precision-guided air to surface weapons, including anti-radar missiles, are beginning to appear;
- and finally, there is the introduction of a limited number of very high altitude, high speed aircraft in the interceptor, reconnaissance and, possibly, strike roles.

N A T O   S E C R E T

-37-

DMC/D(78)2

Associated with all these improvements is an increasing trend in aircrew training and the development of tactics in air exercises, towards conducting offensive operations at very low altitudes. We know, too, that electronic warfare will play a major part in their air operations. Large scale jamming activities by stand-off electronic counter measures aircraft, offensive operations supported by escort jamming aircraft and self-protection jamming equipment installed in strike/attack aircraft are all being seen in exercises and can be anticipated in combat.

These important developments in Warsaw Pact aircraft capabilities, in their aircrew training and in their tactics mean that:

- All of ACE is now within range of their new tactical aircraft.
- An increasing number of their aircraft can operate effectively from their main operating bases, where logistics support is good, airbase protection is strong, and where attacks by ACE offensive aircraft would involve deep penetration into enemy territory.
- Their aircraft need no longer deploy forward to reach targets in ACE and one traditional warning indicator for NATO is disappearing, and
- new force employment options and significantly enhanced force effectiveness will be available to their air planners, including attack from multiple directions, and the ability to conduct offensive operations at very low altitudes.

Assuming that the trends in Warsaw Pact air capabilities will continue, we see a sophisticated air attack concept evolving. This concept would probably involve employment of massed offensive air elements attacking through selected corridors, across the entire frontage of ACE. For maximum effectiveness, the air offensive would probably develop in multiple waves, closely sequenced, utilizing medium bombers, air superiority fighters, and fighter-bombers, coordinated with heavy ECM support. The objective of this concept would be to attain air superiority within the first several hours of an offensive:

N A T O   S E C R E T

-37-



N A T O   S E C R E TDRC/D(78)2

-38-

- By forcing corridors through ACE defences, using low altitude attacks against selected SAM and early warning sites.
- By neutralizing NATO ground based radars through a combination of electronic warfare, low level attack against sites and standoff attacks by anti-radar missiles. And finally,
- utilizing corridors opened in our defences to launch attacks against command and control centres and other high value targets in rear areas, such as NATO airfields and nuclear storage depots.

The Soviets are expected to retain conventional manned aircraft for the major roles in their air offensive through the 1990s. In addition, increasing employment of helicopters by their forces in the armed assault and close air support roles can be expected; and the development of unmanned flying vehicles cannot be discounted. Extended employment of helicopters and the introduction of unmanned systems such as remotely piloted vehicles (RPVs), and cruise missiles, would further compound our low altitude detection and intercept problem, as this is the likely altitude band in which many of these systems would be operated.

So much for that very formidable threat. Now, as I indicated at the start of my talk, several important differences exist between the peacetime air defence posture of ACE and the subsequent wartime air superiority responsibilities. The peacetime air defence mission will be fulfilled by:

- A mix of dedicated air defence systems on rapid reaction alert, with responsibilities confined primarily to operations in friendly airspace.

However, the broader wartime air superiority mission will require:

- Operations in both friendly and enemy airspace. It will require
- the maximum number of air superiority capable systems on rapid reaction alert with a diversity of air roles, including:

N A T O   S E C R E T

-38-

N A T O   S E C R E T

-39-

DRC/D(78)2

- Combat air patrol over key areas, such as those involving the arrival and deployment of friendly reinforcements.
- Escort of friendly strike aircraft into enemy air space.
- Fighter sweeps into enemy territory.
- Attacks against enemy airfields, air defence systems and command and control facilities. And
- air defence of friendly ground and naval forces.

In addition to the above factors which determine the major differences in scope between ACE air defence responsibilities in peace, and air superiority roles in war, several other key elements will determine the pace of transitioning to a war-time posture and the related quantitative and qualitative requirements for air superiority forces. These factors include:

- Close proximity of NATO and WP forces.
- Relatively small geographic areas over which most of the air battle will occur.
- High speeds of modern aircraft.
- Enemy offensive air forces which will outnumber in-place ACE air defence assets by large factors.
- Increasing trends toward enemy attacks at lower altitudes.
- Possible new trends in enemy tactics with the employment of stand off air to surface missiles and with the possible introduction of RFV's and cruise missiles.

Taking all this into account, it is important that our air defence forces must be able to make the transition from a peacetime to a war configuration rapidly and smoothly. Further since our dedicated in-place air defence assets will be inadequate to meet an overall enemy air offensive, emphasis must be placed on rapid augmentation and reinforcement.

N A T O   S E C R E T

-39-



N A T O   S E C R E TDRC/D(78)2

-40-

The primary conclusion is that all the elements of the total air defence system, together with the force employment and deployment concepts and plans, must possess the necessary flexibility to make a rapid transition from peace to war. Thereafter, there must be the capability to ensure efficient and effective allocation of inevitably scarce defence assets to match what will surely be a fluid and rapidly changing situation.

### Counter-Air Operations

Now a few words on counter-air operations as they relate to air defence. To complement our air defence operations, our offensive counter-air operations would be directed against a variety of enemy targets with the aim of reducing his capacity to launch and control his air forces. However, the balance between defensive and offensive counter-air operations, in terms of the relative efforts required, is difficult to assess and pre-plan and will vary according to the needs of the air and ground situations. This presents difficulties in deciding upon the part that each must play in the overall air superiority mission and ultimately upon the quality and quantity of the respective defensive and offensive weapon systems. There is little doubt that there will continue to be a requirement to provide a certain number of dedicated aircraft and dedicated aircrew to carry out the more specialised tasks in each role. However, in view of the changing nature of the balance, there would be obvious advantage in having the ability to employ a percentage of aircraft in either role. Thus, where the basic design characteristics of aircraft permit, their weapon delivery systems and the training of their aircrew should be designed to allow them to be readily switched between offensive and defensive missions. There is, too, the associated need for such multi-role aircraft to be backed up by an adequate supply of weapons for either role. In all, despite the possible increases in initial aircraft cost, in weapon supply and in the additional training required, the capabilities inherent in this multi-role concept could provide greater flexibility in operation at lower cost than the separate employment of single role aircraft.

### The ACE Air Defence System in the 1980/90's

And now to the main body of my talk, a conceptual discussion of the ACE air defence system in the 1980/90's, its composition and the part that each element plays within an interrelated and cohesive whole. Its development over

N A T O   S E C R E T

-40-

the next decades will involve the consideration of many elements, political, economic and technological as well as military and of concern will be some seven basic factors:

- Firstly, and most obvious, the threat, characterized by a trend of increasing options being opened to the enemy and an ever increasing capability which demands associated improvements in defence to counter it.
- Secondly, that the overall system must comprise a balanced force of complementary elements possessing an overall performance capable of countering the threat. An unbalanced air defence mix, with over-emphasis on a single element, would allow the enemy alternative lower risk attack options and permit him to optimise his technology towards a particular attack capability.
- Thirdly, that the significant improvements that technology can offer will need careful consideration of their cost as related to their benefits.
- Fourth, that many of the current air defence components, with their varying, and in many cases reducing degrees of capability in countering the threat, will remain in the inventory into the 1980's.
- Fifth, that the cost of the total system must be related to the overall cost of the total ACE defence budget. Any distortion would be at the expense of equally important offensive forces and thus reduce the overall military flexibility.
- Sixth, that the very different characteristics which relate to each of the four regions of ACE in terms of their geographical, political and economic factors, must be taken into account. And
- Finally, that there is the need to ensure the integration of the ACE air defence system within the total air defence capability of the Alliance. This must not only be achieved militarily in terms of developing adequate interfaces with the many and varied external elements, but also in a budgetary sense so that a balanced, overall Alliance system will result.



DRC/D(78)2

-42-

The final and overall programme for air defence can only be developed by examining the interrelated impact of all these factors and this will inevitably result in difficult but far reaching decisions having to be made concerning relative priorities within the programme.

With this in mind, let us now examine the requirements and the essential features of the ACE air defence system in its three main functional elements.

- Surveillance
- Command and Control
- Weapon Systems

Surveillance and the warning time that it provides to allow the optimum reaction of weapon systems to meet the threat, is obviously a key element in any future air defence system. Our ability to counter the threat will be very dependent upon its effectiveness and we see the following as essential features:

- Comprehensive, gapless cover, from very low to very high altitude;
- A deep look across the borders of ACE extending out to 150 nautical miles at very low level and up to 250 nautical miles at high level;
- Good survivability against both physical and ECM attack;
- A mix of both active and passive sensors to provide high confidence and redundancy;
- The ability to identify friend from foe.

These basic features apply to all four regions of ACE although regional and geographical considerations will impact upon the sensor systems themselves and upon their deployment. But two important factors emerge with regard to sensors. First, although basic surveillance will be carried out by ground radars, both fixed and mobile, the degree of very low level surveillance required will dictate the employment of airborne sensors. And secondly, as the ECM threat increases, passive sensors assume greater importance, not only in possibly providing tracking information on enemy targets but also in assisting in their identification and their possible role.

N A T O   S E C R E T

-43-

DRG/D(78)2

Now the second key element, command and control with its force-multiplying effect - an ugly phrase but nevertheless a very expressive one. And here there is the need to reflect not only the pure air defence requirements but to include all those associated with the airspace management problem, and in particular the important aspect of counter air offensive operations. We see the essential features and characteristics to be:

- Integrated control and reporting centres with their functions expanded to provide effective airspace management;
- Increased data interfaces to encompass a wider range of sensors and improved data exchange;
- Increased survivability by hardening and in-built redundancy;
- ECM resistant communications with greater capacity;
- And lastly, the ability to discriminate friend from foe throughout the total airspace.

And, finally, the third and last major element, the weapon systems, divided into their three component parts: fighters, SAM's and SHORAD's.

In peacetime, the dedicated fighter force is the key element in ensuring round the clock integrity of Allied airspace. In transition to war this force retains its unique contribution in providing area defence in depth. This force would be complemented by multi-role aircraft in their alternate fighter role. As essential features we see a total interceptor force mix of:

- Dedicated fighters with a high kill capability in total weapon system performance against the whole threat spectrum including the very high and very low threat areas;
- Multi-role aircraft providing a reduced but nevertheless significant capability, particularly at the intermediate altitudes and in escort and fighter sweep roles;
- Rapid reinforcement by out of theatre forces;

N A T O   S E C R E T

-43-



DRC/D(78)2

-44-

- The total force fully integrated in terms of command, control and communications, in employment concepts, in standardised air launched weapons and in all aspects of cross-servicing;
- And finally, a total force, integrated air to air identification capability.

Next the SAM capability and essential features here are:

- High survivability against both physical and ECM attack;
- Multiple target capability with rapid reload;
- High kill capability within as extensive an envelope as the state of the art will allow;
- A degree of mobility to provide limited gap filling and tactical re-deployment;
- Contiguous coverage when deployed as a belt;
- And finally, an identification capability.

And to the third and last weapon system component, the Shorad's. And in their unique capability against the very low altitude threat they assume increasing importance in the overall system. They can satisfy three distinct but related requirements:

- Low level defence of army forces;
- Low level defence in depth;
- Low level point defence of key targets.

It is clear that these requirements can only be met if their operations are integrated to the greatest possible extent into the overall command and control system to ensure mutual support and minimise the danger to friendly aircraft. And this cannot be achieved unless confident engagement by these weapons can be guaranteed by the clear identification of friend from foe.

Yet despite the effectiveness of all the elements I have discussed, we cannot expect to exact total attrition on the enemy's offensive force and passive defence measures will be necessary to limit damage to key facilities and assist in

N A T O    S E C R E T

-45-

DRC/D(78)2

retaining our capability to continue the air battle. Such aspects as hardening of vital facilities, aircraft shelters, NBC defence, rapid runway repair capability, increasing runway and taxiway areas, facility tone down and camouflage all play a significant part in complicating the enemy's task.

And now, before I start to discuss how the inter-related air defence elements will be employed, I would like to spend a few moments discussing one aspect which I have already referred to several times this morning, the identification problem. It is a problem that does not lend itself to partial solution. For unless we can provide a completely integrated and interoperable system which will ensure the clear identification of each and every airborne vehicle in our area of surveillance, we will not be able to engage enemy aircraft with the confidence and with the rapidity of reaction that is so essential. Instead we will have to continue to segregate our weapon systems by assigning altitude blocks or geographic zones for each to defend on a fragmented basis. That is the current state of affairs and it is a truly deplorable one where we cannot realise the full potential of even today's limited resources. And in the future there would seem to be little point in introducing new and expensive weapon systems if the very advantages they could offer us, in increased capability, could not be fully exploited.

In the case of IFF, which could provide a direct means of identification, although some standardised equipments have been acquired by some nations, there are considerable numbers of older, obsolescent, equipments in use, many of which are vulnerable to jamming and deception. Furthermore, because of their lack of inter-operability, there is the resultant loss or corruption of friendly replies to interrogation and advantage cannot be taken of the full operational possibilities of the standardised system. And there are even some weapon systems without any means whatsoever of identifying their targets other than by visual means.

In addition, little if any attempt is made to utilise other sources of information relating to both friendly and enemy aircraft to establish or confirm identification by indirect means that is, by means other than by IFF. Thus, although reconnaissance and intelligence gathering systems collect a mass of real time data from a variety of electronic sensors, none of this valuable information is currently processed into the air defence command and control system.

N A T O    S E C R E T

-45-



N A T O   S E C R E TDRC/T(73)2

-46-

There is therefore the urgent need, on a priority basis, to solve the identification problem as a whole, by both direct and indirect means, to provide a clear and unambiguous picture of the total surveillance envelope. It is only then that we would have the ability to realise the total kill potential of our weapon systems without the fear of expensive errors resulting from mistaken identity.

### Employment Considerations

Having identified the essential features of the main functional elements of the ACE air defence system, there is now the need to look at their employment to counter the threat particularly in those areas where we appear most vulnerable.

But let me start with some general tactical considerations, enemy aircraft would be engaged by fighters as far forward as our surveillance and control system will permit. Bearing in mind the large numbers of threat aircraft involved, as they approach their target areas we must have the ability to engage them sequentially and, as far as possible simultaneously, with the maximum number of our defensive systems. We must be able to employ all our assets with the maximum flexibility without the need to inhibit their use by geographical or altitude restrictions. And this requires the complete integration of our command and control down to the lowest action level.

But in looking at the threat as a whole there are some areas which present us with severe problems in vulnerability. And I would like to start with one aspect where the Soviets are placing greater emphasis but one which, I believe, is important to keep in proper perspective; and I refer to the very low level offensive capability. As we in the West know full well, to achieve such a capability is expensive both in the complicated technology involved in the aircraft and their systems and in the very advanced training required to build up the necessary experience to permit effective, round the clock operations. For these reasons, we would not expect a high percentage of any offensive air forces to be capable of carrying out this specialised mission by day, by night and in bad weather. Nevertheless, we know that the Soviets are developing this capability, perceiving weaknesses in our ability to counter it. And currently weaknesses do exist; they exist in our surveillance systems, in our command and control systems and in the weapon systems themselves. But looking to the future, we would see a very significant

N A T O   S E C R E T

-46-



improvement both in our surveillance and in our command and control capabilities with a much extended detection and tracking capability at very low altitude, greater assurance in identification and with much improved weapon allocation. Some limitations will still remain in our weapon systems; for example, it will not be within the state of the art for our future SAM's to have a true capability against the very low flier. But in the case of the fighter, the later interceptors will have an effective look down/shoot down capability and although these will inevitably be in short supply, fitting older fighters and possibly multi role aircraft with suitable avionics and air to air weapons would extend this capability to an increasing percentage of the total available force. And finally, the third element of our weapon systems, the Shorad's, which could be very widely deployed and which have been specifically designed for this role. There will be a growing number of them in advanced forms, with a high kill factor, the ability to operate at night and in poor weather and capable of being integrated into the overall command and control system.

We therefore see the counter to the very low level threat, which I stress does not involve mass raids, as a concept of defence in depth provided by a combination of Shorad's and fighters, long range acquisition and tracking would allow engagement by fighters deep over enemy territory followed by Shorad's forming a second line of defence in those areas where ground forces are deployed well forward. Fighters again could form a third line backed up by Shorad's in their point defence role deployed at the targets themselves. We believe that such a concept, although it would tax almost every element of our air defence system to the full, would provide an effective counter to this growing threat.

A second area of vulnerability and again one on which the Soviets place emphasis is the mass raid. Our current defensive capability lies mainly in the nuclear headed Nike Hercules and despite obvious limitations in its envelope and in its employment possibilities, it does provide a significant deterrent value. Its value, too, is enhanced in that our current remaining defensive systems have a relatively low kill capability. We believe that in the future, however, it will be possible to provide significant improvements in our conventional kill capability, in particular in our replacement SAM's with their greater accuracy, multiple engagement and high rate of fire; and similar improvements will apply, too, to our future fighter force.



DRC/D(78)2

-48-

With an effectively integrated command and control system and the associated improvements in our weapon allocation capability, we believe that all these systems together could provide a realistic conventional counter to the mass raid threat in inflicting an unacceptable degree of attrition in the large formations involved. But the implications for increased munition logistic support for both air to air and surface to air systems, will very much need to be taken into account.

And finally a few words on the interface between land based air defence and its counterpart in maritime operations. An interface which poses several areas for special consideration:

- Continuous, mutual interchange of surveillance and early warning information between land headquarters and naval command ships.
- Standardisation of identification, communication and command and control procedures.
- Provision of land based air defence assets for naval support, utilising tanker aircraft and airborne surveillance and control, in conjunction with shipborne control systems.
- Air defence support over land masses and coastal areas by carrier based aircraft and SAM armed ships.
- An adequate degree of cross-training.
- And the integration of SAM armed ships into the land air defence system while in coastal areas and in harbour.

There is little doubt that the proximity of open ocean areas to ACE, together with the large expanses of the Mediterranean and Black Sea, highlights the importance of an effective land/maritime interface. Furthermore, the time-distance compression of attacking enemy aircraft which places emphasis upon defence in depth and the scarcity of our total air defence assets will require the maximum degree of mutual support between our land and naval forces.

And Gentlemen on that very joint service note, I will end my discussion of the operational concept for air defence as it applies to the eighties and nineties. Inevitably it has been somewhat abbreviated for the purpose of this

N A T O   S E C R E T

-49-

DRC/D(78)2

presentation; and one obvious omission is a discussion of regional considerations. But we do plan to cover these to some degree in later presentations. As I said at the beginning of my talk, the concept is still very much the subject of expansion and refinement. Nevertheless, it has formed, and indeed still forms an essential element in the work of the task force in establishing a clear picture of the interacting elements of air defence as they relate to the threat. I hope, too, that it has served to set the scene for you and will help you to understand better our approach towards the development of our long term programme.

N A T O   S E C R E T

-49-



DOWNGRADED TO NC

SEE: DN(2005)0002

N A T O   C O N F I D E N T I A L

-50-

DRC/D(78)2

The Development of the Long-Term Defence  
Programme AIR DEFENCE

Required Capabilities for Weapons and  
Command and Control

by

Air Commodore C. Baas,  
SHAPE

N A T O   C O N F I D E N T I A L

-50-

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIED - MISE EN LECTURE PUBLIQUE

N A T O   C O N F I D E N T I A L

-51-

DRC/D(73)2

1. You have heard the description of the threat and our concept for air defence operations. It is my purpose to highlight, within that framework, the requirements for the major components of the air defence system. I shall first discuss our principal weapons systems - i.e. aircraft, surface-to-air missiles and short range air defence systems, and then speak about the air command and control system necessary for their effective employment.

2. Let me start by making a few general remarks about the capabilities we are seeking. Although there is a range of improvements that are already in hand or which we can reasonably expect within the timescale that we are thinking about, their significance must be judged against the evolving future air threat. In this context it is considered that they will barely keep pace in military effectiveness with the increasing enemy capability and that in some important areas more advanced capabilities are required. In particular we see the need for essential improvements in secure identification and communications, true all weather operations, look down/shoot down capabilities, multiple target engagement and an effective, survivable air command and control system. Such advances in capability are required not only to offset the most serious effects of existing deficiencies in operational performance but also to match the improvements expected in the future air threat. By their nature, the provision of the majority of these can probably be attained only in the next generation of armaments, and their introduction into air defence inventories would be spread, probably over the next two decades.

3. With those general thoughts in mind, let me start with specific requirements for aircraft and from an AD standpoint we can divide them into two categories - dedicated AD fighters known as:

- all weather interceptors, and aircraft of somewhat lesser capability, designated:
- air combat aircraft.

N A T O   C O N F I D E N T I A L

-51-



DRC/D(78)2

-52-

4. The task of the all weather interceptor aircraft will be to provide area defence in depth, by day and by night, in clear air mass and in adverse weather conditions. These interceptors may also become involved in air combat situations and therefore, while optimised for the AWX role, need to have provision for a close air combat capability. Thus the aircraft must not only be provided for all-weather operation but must have a relatively high energy manoeuvre boundary.

5. To acquire and carry out attacks on manned aircraft, the AWX interceptor must possess a fire control system which is able to detect, track and provide launch information on targets throughout the threat spectrum, i.e. from very low to very high altitudes, matched with AAMS which have a snap up and snap down capability and which can be used in a rear and front hemisphere attack. The addition of a gun to the necessary mix of medium and short range air-to-air missiles will ensure that targets can be engaged within, as well as beyond, visual range, the gun also being required for the peacetime air policing role. These requirements need to be supported by an effective air-to-air identification and, to ensure that the fighters can be adequately controlled, by an ECM-resistant communications system.

6. Interceptors designed and equipped as I have just described will be capable of attacking adversaries under all light and all weather conditions, at all altitudes and from all directions. However, essential as they are, they will be very costly and therefore only can be provided in limited numbers. The deployment of these aircraft must therefore be carefully considered, not only to meet peacetime air policing requirements, but, together with proper redeployment plans, to ensure that they are available throughout ACE in tension and war to meet the threat at the extremities of the enemy's flight profile.

7. Since WP aircraft will continue to outnumber ACE air forces in general and in particular our limited AWX capability, there is a need to augment our dedicated interception force, particularly as a counter to mass attacks. As this type of attack is likely to be carried

N A T O   C O N F I D E N T I A L

-53-

DRC/D(78)2

out during daylight hours, under reasonable weather conditions and at medium altitudes, it involves a far less demanding AD mission. Thus, augmentation by suitably designed and equipped multi-role aircraft can be an attractive solution to this problem, in addition to offering the air commander the option to use his tactical aircraft in defensive as well as offensive roles. There are various names for multi-role aircraft but, for the purpose of this presentation we have chosen air combat aircraft. From an air defence standpoint an ACA should have the following capabilities.

8. Firstly, it should be capable of rapid role change without requiring additional time for turn-around. While aircraft design should provide adequate energy manoeuvrability and speed to cope with future enemy fighter-bombers flying up to 50,000 feet/Mach 2, it is essential that the ACA is suitably equipped to detect and engage its opponent at the earliest opportunity at least in clear air mass. Short-range missiles and a gun will be essential capabilities as will be ECM-resistant communications. A front hemisphere attack option together with air-to-air interrogation would be highly desirable.

9. Having dealt with aircraft, I will now outline the requirements for our surface-to-air weapons; and here we consider two categories: surface-to-air missiles (SAM) and short-range air defence missile/gun systems (SHORAD) for low to very low defence. The capability of both categories of surface-to-air weapons for quick reaction combined with the maintenance of high readiness states over prolonged periods of time and all-weather capability are indispensable assets of an air defence system which is to deter in peace and engage the enemy with high fire power as soon as he attacks.

10. While SAMS must be capable of covering the low to high altitude bands, there must be the added potential to counter the very high level threat. Moreover, in the future new important capabilities must be added to improve the overall effectiveness of SAM.

- a. A self defence capability against very low targets.
- b. A multiple target engagement capability.

N A T O   C O N F I D E N T I A L

-53-



DRC/D(78)2

-54-

- c. A high single shot kill probability (SSKP).
- d. Improved ECM resistance and protection against anti-radiation missiles.
- e. A reliable, secure and positive identification.
- f. Mobility, to improve survivability and to permit rapid redeployment.

Of course each individual weapon system must be able to satisfactorily interface with the integrated air defence system.

11. Now to the last category of weapons - the SHORADS. To provide defence against the increased threat in the low to very low altitude band, SHORAD weapons including vehicle-mounted short-range missiles and guns, will be needed in considerable quantity. They will be employed in the forward combat zone for the protection of mobile army elements and in the rear area to cover vital installations. In both cases they are complementary to the fighter and SAM weapon systems in providing defence in depth, securing an effective overall air defence and placing an unacceptable risk of attrition on the low level attacker.

12. For the future, SHORADS will require:
- a. Reliable communication and data links to the local air defence command centres and other agencies concerned to permit positive control while still giving maximum freedom of action to SHORAD.
  - b. A quick, secure and positive identification system.
  - c. Round the clock operation under all-weather conditions.
  - d. A rapid engagement capability.

13. Having dealt with the air defence weapons, I will now turn to the associated air command and control system. In our concept for air defence in Allied Command Europe we have highlighted the need for an effective overall air command and control system. Such a system is essential in integrating all tactical air operations, i.e. air defence, offensive and support operations, and will encompass:

N A T O C O N F I D E N T I A L

-55-

DRC/D(78)2

- a. The automated facilities at planning as well as at tasking headquarters.
- b. The updated and expanded surveillance and tactical control centres.
- c. The automated facilities at offensive and AD air bases and SAM sites.

14. This diagram illustrates the organisation of such a system with its two levels, the planning and tasking headquarters, and, at the execution level, airspace surveillance and the tactical control of weapons.

15. Important as the planning and tasking headquarters functions may be, when we come to look at the total structure we find that they are relatively simple to specify in system terms, and comprise but a small part of the total system. It is the facilities for the surveillance of the airspace, track production and reporting, and weapon control that represent over 95% of the total investment in the future ACCS. It is also in this area that developments in technology offer a variety of options in the determination of an objective mix of systems in the face of an increasing threat. The improvement of the existing facilities of the air defence ground environment, and their expansion to encompass all tactical air roles, including the important integration of both defensive and offensive roles, will therefore form the major part of the long-term air command and control plan. This aspect will require critical examination to determine specific requirements. It is on this part of the system that I will concentrate my presentation.

16. The surveillance and tactical control system must provide for the peacetime air defence function of the policing of ACE airspace and, in addition, be capable of sustaining rapid transition to effective wartime air superiority operations. To achieve this the components of the system must have good survivability, be resistant to ECM and provide for redundancy and flexible rearrangement in the event of damage to critical elements.

17. I will now deal with the major components shown here. In doing so, I will briefly define the overall requirements and then show how these can be met by the systems that will comprise our eventual "mix".

N A T O C O N F I D E N T I A L

-55-



DRC/D(78)2

-56-

18. Firstly surveillance; and as a first step towards developing our "mix" of surveillance systems, we looked at the airspace envelope within which we required coverage. This requirement is primarily dictated by the need to provide adequate warning to initiate defensive reaction but also by the need to provide tactical control of our own weapons. A vertical cross-section of such a surveillance envelope is shown here. Ground-based radars have limited low-level coverage due to the curvature of the earth. We are therefore constrained today in the contiguous coverage that we can reasonably lay down as the criteria for funding ground radars as part of common infrastructure. The minimum criteria we currently use is shown in orange. It extends from high level down to 10,000 ft over friendly territory and follows the radar horizon beyond ACE borders.

19. However, in view of the nature of the threat we must in the future place much more emphasis on extending the coverage at the lower levels into the blue area shown, to provide the vital early warning, and surveillance necessary for the early engagement of low flying enemy aircraft. This extended cover will also provide for the effective control of all our tactical aircraft, many of which will be operating at low level in enemy airspace. Actual early warning requirements will vary under different tactical and geographic situations: however, a minimum deep look capability of 150 NMS at very low altitudes is foreseen, increasing up to 250 NMS to match the increased threat speeds at high altitudes.

20. In addition to meeting the coverage requirements the surveillance system must be able to operate effectively in a hostile environment. Thus it must have a high degree of survivability in the face of physical attack and be able to provide effective surveillance in the face of concentrated ECM. And finally there must be the ability to clearly identify all aircraft operating within the surveillance envelope.

21. The requirements that I have outlined for the surveillance system are very demanding and can only be satisfied by a combination of sensor systems. This is necessary in order to provide not only the required coverage but increased confidence of tracking in clear and ECM conditions, redundancy and protection against physical attack and the necessary data for identification and threat analysis.

N A T O   C O N F I D E N T I A L

-57-

DRC/D(78)2

22. I would now like to discuss the various ways of sensor systems that we have considered and describe how together they contribute to meeting our requirements.

23. Active radars are the only devices that enable us to detect and track all types of airborne vehicles, over the areas of interest to us. Any future "mix" of sensors that is designed to provide the required continuous coverage in peace, tension and war, at least at medium and high level, must be based on such systems.

24. A series of dedicated ground radars is therefore required, optimally-placed to provide coverage of the critical approaches to ACE. These radars will require to be designed in accordance with the latest state-of-the-art to enable them to operate in ECM as well as benign conditions. Extension of the frequency spectrum, the burn-through potential of phased-array systems, and multi-static techniques would contribute to this aim. Hardening, mobility and easy replacement of exposed components together with emission control could be used to reduce physical vulnerability, particularly against the anti-radiation missile threat.

25. There are a variety of non-dedicated surveillance radars such as SAM, air traffic control and low-level radar systems, which could contribute significantly to overall coverage if they were integrated into the air command and control system. Integration of these additional radars provides the opportunity to further increase survivability by selective control of their emissions and in spreading the frequency spectrum. Full integration of the available sensor data would be achieved by multi-sensor tracking which would integrate the inputs from a number of sources. The advantages of such a system are:

- a. Reduction in total system vulnerability to physical attack and ECM.
- b. Improved surveillance system availability.
- c. Some improvement in low altitude coverage by surface-based system.

N A T O   C O N F I D E N T I A L

-57-



DRC/D(78)2

-58-

26. However, any consideration of the low level surveillance requirement inevitably leads to the conclusion that this can only be provided, in full, by elevating some of the sensors. Various possible vehicles have been considered. Airborne early warning is a proven, highly capable technique which could meet the requirement, particularly in tension and war and a force of AEW aircraft that could be deployed, as required, to critical areas, has been included in our sensor "mix". There would be advantages, too, in deploying additional, but simpler airborne platforms to provide more continuous coverage, particularly in peacetime; and suitable alternative platforms, such as balloons, RPVS or conventional aircraft, need to be considered.

27. The limitations of active radars in the face of severe ECM leads us to believe that the enemy can, by concentrating his efforts, deny us much of our surveillance information. This factor has caused further consideration to be given to the contribution that passive sensors could make to overall surveillance. In the past this capability has been limited to providing for the passive tracking of enemy aircraft jamming our surveillance radars. However, these jamming aircraft represent only a proportion of the threat that could be hidden by ECM.

28. The introduction of a signal intercept system into the air command and control system could significantly improve our overall surveillance capability. Suitable receivers could regularly detect radiated signals from such emitters as enemy terrain-avoidance and airborne intercept radars, identify their sources and enable them to be subsequently tracked. The value of such information, which could be denied to jammed active sensors, is obvious, in significantly assisting the build-up of the total air picture in clear conditions and in maintaining it under ECM. Furthermore, being, in turn, undetectable by the enemy, passive sensors would provide a substantial reduction in the overall vulnerability of our surveillance system.

29. The full advantage of these systems would be obtained if, like active radars, some of the sensors were elevated, airborne platforms - AEW, other suitably equipped aircraft, balloons or RPVS - could carry passive sensors. Passive information could be transmitted to appropriate centres for correlation and derivation of tracking information.

30. There is another system which could contribute significantly to overall surveillance. Developments are well in hand of multi-functional information distribution systems (MIDS). These systems could contribute to surveillance by providing:

- a. A high capacity, ECM-resistant, tactical communication net.
- b. A capability for all friendly aircraft to identify themselves and their position by regular reporting on the communications net.

A limitation of such a system, however, is the line-of-sight requirement resulting from its high frequency transmissions. This limitation could be overcome by the use of airborne relays which would substantially increase effectiveness. These relay vehicles could be the same as those used for passive sensors.

31. These additional surveillance systems have been assessed, not only for the coverage they provide, but for their survivability, ECM-resistance and contribution to overall system flexibility but there are two areas of uncertainty:

- a. First, the degree of position and tracking accuracy which can be provided, by passive, signal intercept systems.
- b. Secondly, the viability of elevating sensors by means of balloons and RPVS, particularly in view of the height and power requirements.

Further work is required in these areas although to satisfy the communication requirement the MIDS relays could be readily installed not only in AEW aircraft but also in simple communication-type aircraft. But there is no doubt that it is only a combination of all of these systems, together with active radars, that can provide the totality of information we require for the complete air picture.



DRC/D(78)2

-60-

32. Before I leave the subject of surveillance, I must emphasise the very important aspect of identification. The penalties to be paid for identification errors are already high and could become prohibitive in the light of the developing threat and the growing lethality of our own weapons. I have already mentioned the part that a MIDS and SIGINT system can play in its position and identification reporting capability for friendly aircraft. There remains, however, the requirement to identify enemy aircraft rapidly and positively, free from deception, exploitation or jamming. It must be possible to allocate priority of our air defence weapons to enemy aircraft that represent the most immediate threat and to exploit to the maximum the capabilities of all our defensive weapon systems to effect maximum attrition of the enemy's aircraft as far forward of the defended areas as possible. In view of the size of the threat, it is necessary to achieve rapid and continuous engagement with increasing intensity as ranges decrease. It goes without saying that friendly aircraft will require protection from engagement by our own air defence weapons. Existing systems do not fully meet this essential requirement.

33. Having dealt with the surveillance systems I would now like to turn attention to the command and control facilities at execution level as represented by the control and reporting centres (CRCS). I will now highlight these requirements.

34. The integration of the control and reporting centres into the overall air command and control concept will necessitate expanding current facilities to cater for the additional control requirements of offensive support, as well as defensive operations. It is envisaged that the weapons system mixes in the 80s and 90s will consist of a combination of the latest state-of-the-art systems together with systems which are currently in service but possibly refurbished and improved. Thus, the ground environment must be capable of controlling a variety of weapon systems requiring different control techniques, as well as coordinating the operations of autonomous air defence weapons systems.

N A T O   C O N F I D E N T I A L

-61-

DRC/D(78)2

35. In addition current shortcomings and deficiencies will have to be overcome if our CRCS are to operate both effectively and efficiently. In particular, we will have to provide for the integration of other, external sources of air picture information. This more comprehensive picture must then be distributed more widely both throughout our own command and control system and to other systems operating in our area. The handling and distribution of the more comprehensive air picture will require a large increase in the number of interfaces between the CRCS and external agencies and equipments.

36. There is, too, the key issue of reducing vulnerability of the CRCS and the supporting systems and I will expand on this a little.

37. At present each CRC is, in general, associated with one radar on which it relies, almost completely, for surveillance information. These radars are generally soft, attractive targets for the enemy; if he destroys a radar the associated CRC loses almost all its total operational capability. A major requirement therefore, is to provide the CRC with other sources of data by netting in other sensors. Furthermore, by remote radar data extraction and transmission, the location of our hardened and dispersed command and control centres could be independent of the sources of their surveillance information.

38. Now how do these expanded requirements affect the capabilities of the CRCS? Here one can make a comparison between future requirements and the capabilities of an existing large NADGE site. As we have seen, in the future the CRCS will assume responsibilities for control of offensive air missions in addition to the current air defence tasks.

39. To meet the requirements for netting radars, data from up to 6 external sensors would be used to create tracks.

40. Control tasks will dictate that the CRCS must have at least 10 control consoles. These consoles should be multi-purpose (i.e. capable of aircraft and SAM control, and recovery) and will replace the present dedicated control positions.

N A T O   C O N F I D E N T I A L

-61-



N A T O   C O N F I D E N T I A LDRC/D(78)2

-62-

41. Track capacity will need to be approximately doubled. Cross-tell capacity must be enhanced to cater for the additional data distribution requirements for the expanded tasks. In total these expanded requirements will necessitate a substantially increased data processing capacity. Some idea of the increased need for external interfaces is indicated.

42. Having dealt with surveillance and control let me now highlight some of the communications aspects of the developed system. The point-to-point communications systems required to support the surveillance, raid reporting and control functions must provide greater capability to meet the needs of the substantially increased data flow. It must also provide flexibility and, where necessary, should be encrypted. The use of switched rather than dedicated networks will do much to reduce current vulnerability of point-to-point circuits by providing greater redundancy together with the ability to reconfigure the system rapidly.

43. Another critical area is the need to ensure that the vital tactical radio link between the command and control system and our aircraft is maintained in the face of the enemy's attempts to disrupt it. At present, we rely almost exclusively on UHF radio for the control of our fighters. In the whole of our command and control chain this link is, perhaps, the most tenuous. It is relatively easy for the enemy to disrupt these communications by jamming.

44. Thus consideration of the air/ground requirements focuses attention on the essential need for ECM-resistant, secure communications systems as part of a NATO-wide, multi-functional information distribution system. As I have mentioned before, the additional facilities of friendly aircraft position reporting and identification would extend the contribution that such a system could make to improving the effectiveness of the overall air command and control system. With airborne relays such a system could extend communications coverage to over the horizon aircraft and replace essential point-to-point ground links that are damaged.

N A T O   C O N F I D E N T I A L

-62-

N A T O   C O N F I D E N T I A L

-63-

DRC/D(78)2

45. Now to conclude my review of our requirements for air defence systems let me return to those critical areas which pervade both our weapons and command and control needs. These are the 'keys' that open the way to overall improvement of our capabilities: firstly, the provision of a genuine low level capability, both for surveillance and weapon effectiveness. Secondly, an effective identification system to provide positive, unambiguous differentiation of friend from foe. Third, an ECM-resistant radio communications system for the control of tactical aircraft, together with its potential contributions towards identification and surveillance.

46. This then completes my review of overall requirements for air defence weapons and command and control facilities. We will now hear how the general rerequirements have been translated into a "mix" of systems for the various regions.

N A T O   C O N F I D E N T I A L

-63-



DOWNGRADED TO NC  
SEE: DN(2005)0002

N A T O   C O N F I D E N T I A L

-64-

DRC/D(78)2

The Development of the Long-Term Defence  
Programme AIR DEFENCE

Air Defence Systems Mix

by

Mr. D.A. Facey,  
NATO International Staff

N A T O   C O N F I D E N T I A L

-64-

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIE - MISE EN LECTURE PUBLIQUE

N A T O   C O N F I D E N T I A L

-65-

DRC/D(78)2

Task force five was faced with the problem of developing a long term programme for air defence in Allied Command Europe which could fulfil NATO's needs in the 1980s and beyond. You have already heard something of our approach to this problem: You have also been told of the Warsaw Pact threat, and the concept for air defence which is being developed in the face of this threat. Of course to implement this concept the Supreme Commander needs weapons with the right sort of qualities, and a means of controlling these weapons in an effective manner: In the last talk you heard something of our requirements in this regard as well, and now, during the next thirty minutes or so, I intend to outline our approach towards defining an integrated programme for air defence systems to be implemented over the next ten to fifteen years.

So for each region of ACE I will first bring together those factors which have a local flavour - the anticipated threat, possible enemy tactics, geography, and so on - in order to arrive at the objective mix. Having dealt in this way with each of the regions, the next step is to add the very necessary time element to arrive at the objective programme for Allied Command Europe. And lastly some thoughts on the sort of trade-offs which the task force will have to come to grips with in order to arrive finally at a viable air defence programme for ACE.

As you know, the task forces have in general been advised that their programme proposals must realistically take into account various known constraints - in other words, we are not being asked to provide a new year's shopping list. Let me first then list those constraints which we must apply in the case of air defence systems. Besides the obvious military factors we must also take into account political, economic and industrial factors. It is of course also necessary to take account of the capabilities and limitations of individual systems, if we are to arrive at a mix which, from an air defence viewpoint, makes sense for the Alliance as a whole.

To begin with we have only taken into account those constraints of a military and political nature in order to arrive at the so-called objective mix you heard of earlier.

N A T O   C O N F I D E N T I A L

-65-



DRC/L(78)2

-66-

But here I think a few words about the definition of the mix are in order. The time allotted to task force five has been such that we have not been able to undertake any independent analyses: We have had to rely on a critical examination of the results and conclusions of available studies - some national, some multi-national, and some carried out within NATO - with the subsequent addition of very essential military judgement, to provide the basis for the objective mix. It is our belief that if this complex of air defence assets could be provided in its totality then SACEUR would have at his disposal an adequate system with the required capabilities, and the air defence of ACE would, to a very high degree, be assured. However, let me just remind you that this mix has been constructed without any national financial constraints being applied, hence there should be no surprise when our final package deviates somewhat from the objective mix.

Starting then from the concept for air defence - and I would remind you have inevitably the question of a concept and the mix of weapons necessary to implement that concept is an iterative process - let me try and develop an appreciation of our needs for the various components of the system for each region in turn.

The Northern region. Here the Soviet tactical air armies will probably pose the major direct air threat. However, medium bombers of the long range air forces and Soviet naval air forces will need routes to the North Atlantic and the United Kingdom area, probably around the North Cape and over Denmark, and this would certainly compound the air defence problem. Forward deployment of tactical aircraft to Kola and perhaps Finland would likely in any thrust against North Norway, and potential targets in the Baltap area and South Norway be within range of bases in Russia, East Germany and Poland.

The region is vast, sparsely populated in general, with a geography which poses severe problems to both defender and attacker. Priority for air defence needs to be given to the militarily important areas in Southern Norway, Denmark and to the areas where reinforcements will land in Northern Norway and Baltap.

Thus there is a requirement for a flexible air defence system capable of rapidly switching its focus of operations. Consequently fighter aircraft appear to be the best option to form the basis of the region's air defence system. In addition, there are a number of key points of industrial and military



N A T O   C O N F I D E N T I A L

-67-

ERC/D(78)2

significance, particularly in the vicinity of Oslo and in the Baltap area, where the deployment of a fixed defence system based on SAMs would be a valuable complement. To counter attack by aircraft penetrating at very low level there is also a need to provide defence in depth, and some local defences for certain high value targets; including airfields. This would require the deployment of suitable Shorad weapons and so we arrive at the composite deployment of weapons shown on this slide. One point about this slide, and indeed all the slides involving map displays, it is meant to illustrate a concept and no more; you should not read into it a task force proposal - in this case for weapons - for the actual deployment of air defence assets.

Turning now to command and control requirements, complete surveillance over the territory of Norway using ground sensors alone is impracticable, blanking by mountains will inevitably cause large gaps in coverage at low level and the problems of installing and maintaining mobile or static radar sites in such extreme climatic conditions are formidable. Considering these limitations, emphasis needs to be placed upon airborne surveillance, linking into the ground command and control system. Furthermore, the command and control complex must be configured to absorb and effectively employ the substantial NATO reinforcement forces and to integrate them with local air defence operations. Finally, effective ship-to-shore communications will be needed to provide the command and control system with the means of exchanging early warning and weapons support with NATO maritime forces operating in the area.

This next chart shows you then for the Northern region, the various weapons and command and control elements believed to be necessary to do the job properly. And I must remind you that the objective mix, shown in the left hand column, is that which appears to satisfy the perceived military need in the Northern region; it does not represent a final task force five recommendation. For this flank we believe the air defence system should essentially comprise four squadrons of eighteen interceptor aircraft deployed to cover the entire region, with each of their airfields defended by one squadron of Shorad weapons. During conflict situations there may be a need to supplement these forces with an additional interceptor capability. Four battalions of SAM are deployed in Southern Norway and in the Baltap area where they will link up with the central region SAM defences. Finally, on the weapons side, a total of seventeen Shorad battalions gives the necessary localised low level cover.

N A T O   C O N F I D E N T I A L

-67-



N A T O   C O N F I D E N T I A L

DRC/D(75)2

-68-

For command and control assets you will see that the objective mix comprises seventy surface radars, of which forty-one are dedicated air defence radars and the remaining twenty-nine are non-air defence sensors netted into the overall system. We also see a need for six passive sensors, and of course an AEW capability - and here let me make it quite clear that the number of AEW aircraft indicated in this slide, and included on some of the following slides is based on the area coverage and must be regarded simply as an illustrative figure; we have included AEW since it is an essential element of the mix but of course the actual number of such aircraft deployed in the Northern region, or indeed in any region, will inevitably depend on the situation in relation to the rest of ACE. And last, but by no means least, are the six control centres.

For comparison the right hand column shows the air defence assets expected to be available in the mid eighties and, as you surely would predict, there are a number of shortfalls.

Surface-to-air assets are limited, and there is the deficiency of one interceptor squadron - it should be also noted that according to present plans the available interceptor force in 1985 will have neither the required all-weather capability nor a capability against the very high altitude threat.

On the surveillance side you see there is a significant increase in the number of ground based sensors. I do not want to go into too much detail here, but I should add that many of these additional sensors are of the light-weight mobile variety and we are aware of Norwegian proposals for such mobile radars. We are also aware of their proposals for mounting the principal static radars in protected sites built into the mountains. But neither these nor the mobile radars are included in the number of ground based sensors shown in the right hand column because they are simply proposals and do not yet form part of a firm plan. However, even with these additions, we still see the need to net-in some additional sensors to provide the necessary flexibility and redundancy for the ground environment.

The airborne component is of course missing at the moment, and it would be deployed as necessary to provide coverage in tension and war particularly over Southern Norway and the Baltap area, and also in the far North.

N A T O   C O N F I D E N T I A L

-68-

N A T O - C O N F I D E N T I A L

-69-

DRC/D(78)2

You will note that the objective mix entails a reduction in the number of control centres. We believe a smaller number of properly equipped, netted and hardened centres would provide a much more resilient command and control capability than the present system. This is a general conclusion from the work of the task force and so you will see similar reductions in control centres indicated on each of the regional tables.

Next then, the central region, where we could expect the major offensive air threat to be most likely directed, with penetrations and attacks along the whole front. Soviet tactical aircraft will have the range to attack targets throughout West Germany and Benelux from home bases in Western Russia, Poland, East Germany and Czechoslovakia. Priority key areas for enemy attacks are likely to be our nuclear delivery systems and our counter-air offensive forces many of which are concentrated within this relatively small area.

The magnitude of the threat, the possibility of very little warning of an impending attack, plus the fact that many of the potential targets are closely located, leads logically to a defence biased towards SAM. In addition, also faced with a potential attack with limited warning, it is evident that the Allied armies need a rapidly responsive air defence capability, but it is also apparent that this capability must be viewed as one part of the overall air defence complex of the region. Indeed, it is essential that all the air defence needs of the region are treated as an entity.

Weapons deployments should be weighted well forward to cover likely Warsaw Pact approach routes, and hence one sees a need for the armies in the forward area to be equipped with surface-to-air weapons. These need to be of high mobility at the very front, which implies the use of man-portable weapons of the blowpipe or redeye category, backed by Shorads which may be either anti-aircraft guns or surface-to-air missiles. These weapons will provide the means to deter hostile aircraft penetrating at low and very low level.

Providing the armies with a rapid reaction capability against low and medium level intruders, and providing evidence of a cohesive approach to Alliance air defence there needs to be a forward SAM belt: an extension of the belt across Northern Germany and Holland provides a defence against a flanking attack, and also some attrition of Warsaw Pact aircraft en route to the United Kingdom.

N A T O - C O N F I D E N T I A L

-69-



DRC/D(78)2

-70-

Behind the belt defences there is need for a balanced mix of interceptor and surface-to-air weapons with specific target complexes being defended by SAM and Shorad weapons, the Shorads particularly being used extensively to provide defence in depth against attack by very low flying aircraft, and to protect vital military installations. Interceptors will give the system the flexibility to concentrate resources, and to supplement the surface-to-air weapons particularly if as a result of corridor busting tactics, the forward SAM defences appear to be weakening. Interceptors can also protect against flanking attacks within the region.

Because of the large concentrations of Allied and enemy forces likely to be involved in a conflict in the area, the command and control system must be particularly responsive and flexible, and must be capable of absorbing reinforcement forces. These factors, coupled with the relatively small size of the region tend to result in a command and control package which is significantly different from that required in the other regions.

For air space surveillance, a forward row of some six radars is required along the border for early warning during peacetime and times of tension. These must be considered to be at severe risk to enemy attack, or may indeed, be overrun in way. Where topography permits these may be replaced by mobile radars which could, to some extent, reduce this vulnerability.

To back up these forward sensors five additional mobile systems should be available to fill gaps and possibly move with a flexible front line.

Further to the rear, two rows, each of five active radars, are required to provide coverage in depth, flexibility and survivability. Thus a total of some twenty two radars are required for the region.

The central region is comparatively well endowed in respect of the availability of supplementary radars for netting-in, and this situation will surely continue. There are currently some eighty candidate sites for netting-in, these, together with the dedicated sensors, would mean that the active tracking of aircraft in the central region could be flexibly performed by up to 100 equipments; this is more than four times the number in the present air defence system. The deployment of AEW in tension and war, will provide the vital low level radar coverage as well as introducing further highly mobile and flexible facilities to back-up and, if necessary, replace ground installations. Control and reporting



N A T O   C O N F I D E N T I A L

-71-

MAC/2(73)2

facilities required for the central region have been assessed on the basis of the weapons systems to be controlled, bearing in mind the various likely scenarios that could occur during transition to war. Hardened CRCs are located at least 160 kilometers back from the front line, and dispersed in a configuration that provides for mutual support and back-up. In passing I would add in this regard that the plan for the South of the region, currently being implemented by the German authorities, goes some way to achieving this configuration.

You will be aware that existing air defences in the central region conform generally to the system I have outlined, and looking at the plans of the nations which contribute to the defence of this region, it is evident that we have no conflict in terms of a common understanding of air defence needs. Aside from the question of an AEW capability, the problem we face in the central region is essentially one of numbers as you can see from this slide which describes the objective mix, and also lists in the right hand column the air defence assets expected to be available in the mid eighties on the basis of current planning.

Eighteen squadrons of interceptors, with a capability against the high altitude threat, are needed to achieve the required density of aircraft throughout the region.

To provide the necessary quick response to a low level attack anywhere along the 700 kilometre of common border with the Warsaw Pact in the Central Region will require the deployment of fifty-two battalions of Shorad weapons with forward units of the Allied armies. Providing a barrier defence are thirty-one battalions of SAM immediately behind the forward defences. Defence in depth is provided by a combination of sixteen battalions of SAM, and forty-two battalions of Shorad deployed to cover airfields and other vital target areas in the region. Finally, to ensure a properly co-ordinated defence in this region, which is likely to be faced with an extremely complex air situation, it evidently needs an effective command and control system, including IFF, and hence the large number of sensors.

Before you pale at the thought of such a massive increase in the number of air defence radars let me remind you that only about a quarter are dedicated sensors: sixty-eight other radars, including the German low level reporting system, are netted into the command and control system to provide the necessary surface surveillance capability. There is also the powerful CRC complex coupled of course with an airborne element.

N A T O   C O N F I D E N T I A L

-71-



N A T O   C O N F I D E N T I A L

DRC/D(78)2

-72-

From the right hand column you can see that in the mid eighties, the central region will have an air defence system in which the major shortfalls in time of tension and war are largely in terms of numbers. Only thirteen squadrons of interceptors, of which about half will have the full all-weather capability required, rather than the eighteen squadrons deemed necessary. A deficiency of twelve battalions of SAM and fifteen battalions of Shorad. Fewer surface sensors than are needed to provide adequate surveillance of the region - in fact largely a lack of netted rather than dedicated air defence sensors, and as yet no AEW capability. So unless some means can be found to improve the overall effectiveness of the system it appears that SACEUR just does not have sufficient assets to properly defend the region.

Moving southwards, in any conflict situation involving the southern region we would expect elements of tactical air armies from southern military districts of Russia to deploy into Rumania, Bulgaria and Hungary in support of the land battle, with medium bombers being committed to counter-air operations. The Black Sea fleet air forces will probably be supported by the long range air force in the task of destroying carrier borne strike forces in the Mediterranean. The threat could become multi-directional with the possible involvement of Syria, Iraq, Albania and the North African countries with potential targets for enemy air attack concentrated in widely separated areas of Italy, Greece, and Turkey. In addition, there are four strategic areas which will be of considerable interest to the Warsaw Pact, namely North Eastern Italy, Thrace, the Turkish Straits and the Straits of Gibraltar.

Considering the large area involved, much of it being water, plus the requirement to defend only a relatively small number of key areas in installations, quickly leads to an effective air defence of the Southern Region being based primarily on interceptors. SAM systems provide additional defence of important areas such as the North Eastern approaches of Italy, and the Bosphorus. Against the low level threat Shorads would again provide defence in depth and point defence of vital targets. Thus we arrive at the general disposition of weapons illustrated on the slide. It would be remiss of me if I did not remind you that in a war situation, the assets will be augmented by those of the Sixth Fleet.

N A T O   C O N F I D E N T I A L

-72-



N A T O   C O N F I D E N T I A L

-73-

DRC/D(78)2

As a whole, the command and control system must be configured to absorb NATO reinforcement forces and to integrate them with local air defence operations. Adequate surveillance of the Southern Region would need to include all aspect coverage to meet the threat from non-Warsaw Pact countries. Because of terrain limitations, and the need to cover large sea areas, it will not be possible to provide coverage using surface based sensors alone, and some level of airborne surveillance will be essential, particularly to provide low level detection. The presence of the sixth fleet in the Mediterranean, with its extensive surveillance and self-defence capability, demands an effective ship-to-shore interface so that the command and control system can effectively exchange early warning and weapons information with the maritime forces.

What then is our solution for the Southern Region? This next slide provides a summary of the objective mix for the region.

There is a need for eight squadrons of interceptors to be deployed in the area. Nine battalions of SAM are deployed in the Po valley, and around the Bosphorus. Coupled with the SAM defence, forty-six battalions of Shorad will be needed to protect airfields, ports, command and control centres from attack at low level, and to provide low level defence for elements of the field armies. To provide the necessary surveillance a large number, some ninety sensor elements are required, about half of which are dedicated air defence radars, and coupled with these surface based sensors is the airborne sensor element - and again I would remind you that the number of AEW indicated in the slide is based on system coverage, and is only for illustration; as I said previously, the actual number of aircraft deployed in any particular theatre will depend very much on the overall situation in ACE. In addition, of course, we must not forget the presence of the sixth fleet in this region, and the AEW capability associated with it.

Again, the right hand column provides for comparison, the air defence assets we expect to be available in this region in the mid-eighties. There is apparently no shortfall in SAM, although I would caution you that the planned capability is not the modern SAM we see as part of the objective mix. You will also note that there is a significant reduction in the number of control centres - this smaller number of properly hardened centres would, we believe, provide a much more effective and survivable system for the region. Obvious areas of concern in the southern region are the level of interceptor capability, only five interceptor squadrons rather

N A T O   C O N F I D E N T I A L

-73-



DRC/D(78)2

-74-

than the eight needed, insufficient sensors integrated into the command and control system, and of course the lack of an ACE AEW capability.

Finally, the UKAIR region: and here the main threat concentration will be from Soviet long range aviation medium bombers, supplemented by Soviet tactical fighters, medium bombers would probably approach mainly from the North East, but their final run-in could be from any direction. In addition, Soviet naval forces would be likely to undertake anti-shipping operations in the Norwegian and North Sea areas. The British Isles themselves will be a primary staging and assembly area for reinforcements and resupply from North America and will also be a springboard for air support to the continent, UKADR air space will be transitted by large numbers of reinforcement aircraft which will require air defence cover. The scope of these air operations indicates that bases in all parts of the United Kingdom will need to be utilised and defended, with key targets for enemy air attacks being naval, RAF and United States bases housing operation, follow-on, reinforcement and transport forces. Besides these vital military facilities, this region also contains a significant part of the Alliance's industrial capability which will also need to be afforded some protection.

The distance from the Warsaw Pact territory to the region, and the resulting increased tactical warning time, together with the large sea areas to be covered, indicate fighters as the primary weapon system for the defence of the United Kingdom and maritime forces. SAMs will be an important asset to protect vital target concentrations, particularly in the Eastern half of England, backed up by Shorad, to provide defence in depth and point defence against aircraft penetrating at low level.

Although the United Kingdom will probably receive earlier warning information than the other regions, allround surveillance will be required at every level, including the large sea area, to enable area defence in depth, and also to fulfil commitments for the air defence of maritime forces. Land based sensors will be unable to cover the entire area, and airborne surveillance, supplemented with information obtained from any seaborne sensors, will be needed to provide low level cover and warning over the sea approaches. In addition to providing this region with threat information, these sensors, together with their associated weapons systems, will also provide some early warning and protection to the Southern half of the Northern region and to the Central region

from threats from over the Norwegian and North Seas. The overall UKAIR Command and control system must be capable of handling a large amount of air activity data. And an effective interface will be needed with naval forces in the area. Considering the extensive nuclear strike capability that will be deployed in the United Kingdom, the survivability of the overall command and control system will be of paramount importance.

And so to the mix for the United Kingdom air defence region summarised in this next slide. Eight full squadrons of interceptors, equipped with effective air-to-air weapons will be required to be deployed throughout the country. Four SAM battalions are seen as necessary to protect the major target complex in the South East, and in addition on the weapons side we have six battalions of Shorad to provide airfield defence and a point defence of the most important targets. In fact, the deployment of the surface-to-air element of this weapons mix will provide a formidable defence in depth over much of the South Eastern part of the country.

On the command and control side, you see the number of surface based sensor elements set at thirty-three, and only eight of these are dedicated air defence radars, with additional surveillance capability in the form of airborne platforms, the whole being integrated through four control centres.

From current plans for the UKADR, shown in the right hand column, it is evident that there is rather less in the way of interceptor forces than desired. Also, the surface-to-air package apparently does not fit since no SAM element is planned, and the planned Shorad is in excess of the objective mix.

You will see too that the presently planned surveillance system also falls short of that desired, although the UK's proposals for an improved ground environment, together with the deployment of an airborne system, go some way towards meeting the requirements for the region. One problem here is that, except in the South, there are few existing radars which are candidates for netting into the air command and control system and hence additional equipments need to be obtained.

The mixes of air defence assets - or the objective force mix - that I have just shown you for each region are what we believe necessary to provide an adequate air defence capability for Allied Command Europe.

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIED - MISE EN LECTURE PUBLIQUE



DRC/D(73)2

-76-

As presented these of course do not represent a programme. The next stage of our activity then has been to convert them into a logical programme which means of course taking into account existing or anticipated production schemes. By way of example, I would like to develop the objective programmes for the Central Region -- and I must apologise for being so very conventional in taking this region as the example, but it is here that we presently have the most complete information on rational plans and the various systems.

This next slide shows, for the next fifteen years or so, the funding profile for presently planned procurement of interceptors, SAM and Shorad. This total programme involves the procurement of various interceptor aircraft - F-15, F-16, and the air defence variant of the MRCA; Gepard, Rapier and Roland represent the Shorad weapons; and I have assumed that Patriot will provide the necessary SAM capability.

To arrive at the objective programme for weapons, we need to add to the currently planned programme so that we obtain the additional weapons needed to achieve the objective mix, and this must be accomplished in the shortest possible time - although taking into account obvious production constraints. The resultant funding profile in doing this is shown here in red. So we have planned programmes in blue, and objective programmes in red. As you might expect, attempting to correct deficiencies in short order creates a need for very high acquisition funding for a number of years.

The next slide provides the same story for command and control showing here the currently planned national and NATO programmes in blue and with the objective programme in red. Once again, because many of the elements involved are available, a very high rate of early reporting results.

Putting the funding requirement for both weapons and command and control systems together, as in this slide, does I think clearly illustrate the problem. Very high funding levels would be required. And this leads me to the last part of my talk; a few words on the problems of developing final programme options.

The objective mixes and the objective programmes have been developed as the important penultimate step towards the construction of our end product, the programme options which would provide a viable air defence system for ACE. The final step represents the inclusion of the very real constraint of financial practicability in terms of what the nations can afford to spend over the ensuing years.

N A T O   C O N F I D E N T I A L

-77-

DRC/D(78)2

This dominant financial constraint will require us to clearly identify priorities within and between the individual elements of our air defence assets as they are set out in our objective programmes, and, inevitably, the definition of priorities will lead to the deferment of some important capabilities and the possible deletion of others. It is these very difficult judgements which the task force will need to make in order to provide a realistic air defence programme for the next ten to fifteen years. The final programme options are likely to result in some decrease in overall capability, below that which may seem to be desirable. But, the main object of introducing a task force approach to the problem was to find ways of achieving the best balance of assets across the whole spectrum of air defence and within the difficult constraints that face the Alliance today.

How then do we attempt to realise a programme which is affordable by the nations. One obvious way of eliminating high peak spending is to extend the procurement period.

Here we have the funding profile for a programme again leading ultimately to the objective mix, but rather than demanding maximum production rates, this programme foresees the continuation of presently planned production activities at more or less constant rates. As can be seen, by stretching our new fighter, SAM and command and control programmes well into the nineties we have reduced the early funding requirements. But, of course, the problem does not lend itself to such a simple, single action solution. Owing to their very high priority, we will be forced to introduce some individual elements at the earliest possible stage: And here, possibly, improvements in identification come to mind. These will produce their own individual peaks which we will have to compensate for by phasing or reducing other elements, but we will have to constantly bear in mind the inter-active nature of all the components of air defence and the possible impact that the phasing or reduction of one capability can have on the whole. This of course, is the nub of the problem and I would like to end by giving an example of how we may manipulate individual aspects of one particular air defence component. The component I have chosen is the SAM capability, and incidentally, we are rapidly approaching the decision point on SAM.

N A T O   C O N F I D E N T I A L

-77-



N A T O C O N F I D E N T I A LDRC/D(78)2

-78-

The objective programme for the Central Region assumes replacement of all the existing Nike and improved Hawk systems with a modern SAM by the early nineties, an expensive replacement programme involving some 200 systems in total. Shown in blue on this next slide is the associated funding profile. Without doubt the programme has the merit of resulting in a much improved surface-to-air capability by the early nineties, but unfortunately demands high acquisition funding over the decade beginning in 1983.

Now there is more than this one option in the introduction of our future SAM capability. An alternative, which provides a rather different funding profile, is to replace the Nike system at a reduced rate during the latter part of the next decade which would still provide a major part of the needed improvement in the surface-to-air capability. This could then be followed by further improvement to the existing improved Hawk system which would be completed during the nineties. The funding profile associated with this option is shown in green. Overall funding requirements between now and the mid nineties are reduced, although ultimately the total funding applied to SAM replacement might increase. There is of course some inevitable reduction in the overall capability of the air defence system.

And we could go one step further if there were an overriding need to fund other higher priority weapons or command and control needs. Here, we would not plan to replace the improved Hawk system during the timescale under review but to leave it in service. Such a situation would lead to the funding profile for SAM shown in red.

I hope that these examples have given you some idea of the way we are tackling the problem of providing final programme options which will be seen to be affordable and realistic. Of course we have not got all the information we would like, particularly budget information, and inevitably for the longer term we will be dealing with very round, ball park figures. But it is the attempt to solve the air defence problem in its totality that the true value of the task force approach has been seen. It is very apparent that we have not been given enough time to do our job: But we are hopeful that our end product may achieve one object, and that is to clearly demonstrate that air defence can only be planned as a cohesive whole, without fragmentation and without the isolation of any one part.

N A T O C O N F I D E N T I A L

-78-

DOWNGRADED TO NC

SEE: DN(2005)0002

N A T O   C O N F I D E N T I A L

-79-

DRC/D(78)2

With that brief survey of task force five's work so far, in developing an air defence programme, and our first thoughts on funding considerations I will hand you back to Admiral Price for his summary and conclusions.

N A T O   C O N F I D E N T I A L

-79-

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIE - MISE EN LECTURE PUBLIQUE



DOWNGRADED TO NC  
SEE: DN(2005)0002

N A T O   C O N F I D E N T I A L

-80-

DRC/D(78)2

The Development of the Long-Term Defence  
Programme AIR DEFENCE

Conclusions and Outlook

by

Rear Admiral C.E. Price,  
SHAPE

N A T O   C O N F I D E N T I A L

-80-

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIE - MISE EN LECTURE PUBLIQUE

N A T O   C O N F I D E N T I A L

-81-

DRC/D(78)2

Now, a few words in conclusion; and I am not going to attempt to summarise for you the various presentations that you have heard today. Instead, I will first briefly outline some of the problems we foresee in developing the final stages of our programme; then I would like to end by offering some personal thoughts on long-term defence planning which have stemmed from our Task Force work.

You will recall that our aim in Task Force 5 is to present several final programme options within various budget ceilings, using the nations' planned budgets on air defence as the datum. There is little doubt that when we add together the cost of all our objective programmes, two of which you have heard today, the total sum will exceed the planned national budget ceiling. There will, too, be peaks and troughs and I suspect there will not be too many troughs. So the final stages of our work will be to refine the various priorities and to phase in the various elements to develop a ten to fifteen year do-able programme. It will mean having to reduce the number of weapons in the objective mixes, and that of course cannot be done just on a pro-rata basis. It will mean having to decide on the balance between weapons on the one hand and the means of employing them, the C<sup>2</sup> elements, on the other. And in the case of command and control we will have to come to some value judgements on a problem which has run like a threat throughout today's presentation, the identification problem. Its early solution is expensive and to give you some idea it involves spending some 130 m dollars in the short-term and 900 m dollars in the longer-term. We will certainly have to find room for some, if not all of that money. But there are, of course, other competing elements and to give you some examples, we are talking of:

- a sum of \$ 6000 m for the future SAM programme
- of \$10000 m for the future fighter programme
- of \$ 2600 m for the future AEW programme and
- of \$ 2000 m for the future ADGE programme.

All these will have to be phased into a total air defence programme whose total budget ceiling ranges between 2000 m dollars to 3000 m dollars per annum.

N A T O   C O N F I D E N T I A L

-81-



DRC/D(73)2

-82-

To assist us we are not going to have the luxury of embarking upon lengthy studies or computer programmes. Instead, it will again be a question of applying a phrase you have already heard today, subjective military judgement, based on the expertise we have amassed, to arrive at our final programme options. And I am only too well aware that there are many people within NATO, within the nations and probably sitting in this room today who may well claim that their own subjective military judgement differs from and is superior to ours. Be that as it may; if we can, as I hope we can, provide realistic and sensible programme options, they can at least serve as the basis for a fruitful discussion; and that is a starting point which certainly does not exist today.

Now I would like to end by offering some personal thoughts on long-term planning; and there is no doubt that our work in the Task Force has given us a new insight into this difficult subject. There is no need for me to dwell too much on the strengths and weaknesses of our current planning. Suffice to say that there is the major disadvantage in the force planning procedures of a built in imbalance of a NATO six-year planning cycle set against national planning where major equipments are being planned to enter service some ten to fifteen years after initial conception. Thus, in most cases national decisions have already been taken long before NATO's consideration can be taken into account and without any real input being provided by the NATO Military Authorities. In the early sixties, of course, an attempt had been made to provide such an input in the NATO basic military requirements - the NBMR's. But after some seven years wherein not one NBMR had resulted in a NATO project, this concept was dropped and the CNAD organisation came into being. This, in effect, took much of the focus away from the NATO Military Authorities and placed long-term planning for future requirements even more firmly on the nations. What little centralised planning had been attempted was dropped in favour of a more flexible system where there were no rigid rules but where cooperative action for equipment procurement could take place between two or more member nations. Inevitably, the various armament groups that were formed appear to have become somewhat commercially flavoured with the sale of nationally produced weapons about to come on the shelf being the goal rather than a determined realisation of the future needs



of the NATO Commanders. So we have reached a state of affairs today where the MNCs have no clearly accepted role of providing guidance or advice to the nations with regard to the long-term equipment of the forces they would ultimately command. And this would appear to be perpetuated in the recently established armaments planning review where although nations will provide details of their planned future weapon procurements on an annual basis, only then will they be assessed against the possible standardisation or interoperability needs of the NATO Military Authorities. Nevertheless, I would certainly not advocate any drastic reorganisation of NATO's planning procedures or of the associated responsibilities; I do not believe that is required. But on the other hand, I do believe that the initial stages of the equipment planning process should be carried out in a more coordinated and cooperative fashion between NATO and the nations and that the MNCs can play a part in assisting this process. Our Task Force work, and in particular our discussions with the nations, has clearly evidenced this. The MNCs and their subordinates have the ability, not readily acquired by nations, to look across the whole field of NATO defence and identify their future needs. They, as the future commanders of the forces, are in a position to develop operational concepts setting out the tactical employment and deployment considerations for the future to which equipment requirements could be related. At present the MNCs have to adjust and adapt their operational planning as the force goals are developed to take into account equipments provided by the nations which for one reason or another may or may not be well suited to the task. But if the MNCs provided a clear identification of NATO's long-term needs on the lines of an expanded version of the operational concept on air defence that I outlined this morning, to be used by the nations as an essential precursor to their equipment planning, it would, I believe, represent an important step forward to more realistic long-term defence planning within NATO. And I must stress here that I am not suggesting that the MNCs get into the requirements business; that responsibility rightly belongs to the capitals. What I am talking about is the provision of a conceptual framework within which requirements could subsequently be developed. This would involve dialogue and coordination between the MNCs and the nations at a much earlier stage than we see taking place today; and I can see every advantage in that, as a means of more closely aligning national planning with NATO's needs.



N A T O   C O N F I D E N T I A LDRC/D(78)2

-84-

There is one further aspect I would like to touch upon and it concerns common funding. Despite some imperfections, NATO's infrastructure programme provides an impressive list of projects which have been completed within a framework of common funding, with the nations recognising the need for central planning for common facilities for NATO forces. And as an aside, it is interesting here to view this success against the relative failure to achieve common equipment planning. But there is no doubt that the unique nature of air defence and the part that it plays in NATO lends itself to common funding and this was recognised in the development of the NADGE. Costly items of air defence equipment must be flexibly employed and deployed within an overall integrated capability and there are obvious examples. Surface-to-air missiles at a reinforcement port not only protect that port but, equally important, provide defence for the men and material in the reinforcement shipping of other nations. Again, all the elements of command, control and communications, down to the very lowest levels, contribute not just to a particular part but to the whole. And a more pertinent example is the AEW force whose aircraft could be employed NATO wide over regions and over nations regardless of individual contributions to the cost. And here we have the interesting precedent being set whereby a major and costly air defence system is being progressed under a common funding concept. I hope that bodes well for the future because I believe that in air defence there are very real advantages in developing and furthering the concept of common funding. Not only could equipments be provided that collectively would be more closely aligned to the task but problems of interoperability and standardisation could well be significantly reduced.

But the final words on long-term defence planning must go to a Secretary General of some years back, Mr. Dirk Stikker. When commenting upon a report by a high level working group set up to determine why the NFER concept had failed, he made the observation you now see on the screen. And let me leave you with the thought that those words are as true today as they were fifteen years ago and as you and I well know, in the ultimate it is the will of each and every one of the nations that is the key.

N A T O   C O N F I D E N T I A L

-84-

DOWNGRADED TO NC

SEE: DN(2005)0002

N A T O   C O N F I D E N T I A L

-85-

DRC/D(78)2

United Kingdom Experience with the  
NATO Long-term Defence Programme

by

Mr. Michael Quinlan,  
Deputy Under-Secretary of State for Policy and Programmes,  
Ministry of Defence,  
London

N A T O   C O N F I D E N T I A L

-85-

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIE - MISE EN LECTURE PUBLIQUE



1. I should like, if I may, to start with a couple of scene-setting points about my country's posture in tackling the work of the Alliance's long-term defence programme following the London summit. One point concerns our organisation and the other our finance.

2. The first is this. Just over a year ago we thought it would be a good idea to ask a senior British official who had just left a post in the NATO International Staff to write a report on what the UK performance in dealing with NATO business looked like from Evere, and how it could be improved in style and procedure. We asked him for a frank report with no punches pulled, and that is certainly what we got, expressed in clear and vigorous language. (Some of you may even guess, from that description, who the individual was). He did us a real service, and we have profited by it.

3. I shall not bother this assembly with the details of what we have done or are doing as a result of the report; but the particular item relevant for my present purpose is that we set up a special co-ordinating group to oversee and co-ordinate the whole range of our business with NATO. I chair it, and it comprises the main two-star policy people from each of the Services and comparable people, both military and civilian, from the various other parts of the Ministry of Defence which have most directly to do with Alliance business. We also have a senior diplomat from the Foreign and Commonwealth Office; and our key staff men from Brussels - our Defence Counsellor and our Deputy MILREP - are full regular members, coming to London for each meeting. This body was set up before the Summit, but it has turned out to be a particularly useful and timely instrument for dealing with our national participation in both the short-term and the long-term initiatives launched by President Carter.

4. My second preliminary point is an economic one; but I am glad to say that it is of a different kind from those to which my country has had to draw the Alliance's attention uncomfortably often in the past couple of years.

5. During the summer and autumn of 1977 it became increasingly clear to those of us working on defence planning in London that there was a good prospect - not a certainty, but strong ground for hope - that our role in the work on the Alliance's long-term programme could be set against the background of a positive response by the UK Government to

LHC/D(78)2

-87-

the call, in the 1977 Ministerial Guidance, for real increases in resource allocation from 1979 onwards. These hopes have now been realised. The annual Government White Paper on public expenditure, published last Thursday, shows figures for the defence budget which are 3% higher in 1979/80 (that is, the financial year running from 1st April 1979) than for 1978/79, and 3% higher again in 1980/81. (The tables for 1981/82 repeat the 1980/81 figure, but that is merely a matter of convention from reflecting the fact that no decisions have been taken even in outline for the years beyond 1980/81.) These increases will be real ones; we shall make separate and additional allowance for the effects of inflation when the time comes. I stress also that these increases are significantly higher than those allowed for non-defence programmes - a fact which is perhaps made all the more striking by the possibility of an election in the next year or so.

6. All this means that we have been able to approach the work of the Task Forces with growing confidence that our own participation would not need to be more conditioned than that of our allies by fears of possible financial problems. Affordability of course still matters to the UK, as it does to all of us here; and an extra 3% is not infinite affluence. It does not mean that we have 3% of spare loose change jingling in our pockets - we need the money primarily to sustain our planned overall programmes of force modernisation and improvement. I cannot therefore promise, I fear, to drop the whole 3% instantly into the collecting box of even the most charismatic evangelist. But the increase does mean that where, as work has progressed in Alliance discussions, we have sometimes advised caution - and I am well aware that we have done this in several instances, often along with other Allies - this has been not because of an excessive desire to protect our financial flank but because of our concern to seek work done on a footing thorough enough and realistic enough to stand the test of time.

7. Let me now turn more directly to the subject prescribed for me.

8. The long-term programme seems to me the most important item on the whole agenda of the Alliance. There is evidence, by the way, that this assessment is shared at levels much more exalted than mine in the UK. Our Prime Minister has called for us to make a special report to him on the programme well in advance of what would be the normal briefing cycle for the summit.



N A T O   C O N F I D E N T I A L

-88-

DRC/L(78)2

9. As I see it, we are seeking in the long-term programme to achieve two things, distinct but related. The first and primary one is to strengthen the defence and deterrent capability of the Alliance. The second, I suggest, is to strengthen the self-confidence of the Alliance.

10. The first of these aims means that at the Washington Summit a little over four months from now we have to set in train action that will really happen and will really improve our collective strength. The second means that at the Summit we have to achieve a visible and widely-shared success. Now those of course are not in any sense conflicting objectives; they are complementary. But carrying them forward together does require a certain judgement and fine balance, since in the short run the emphases they require may be a little different.

11. In the pursuit of these two companion objectives the concept of using international task forces without direct national responsibilities has been an excellent one. We cannot yet judge their success in delivering the goods in the end, but we in Britain have welcomed the task-force method; and we have been glad to help to the fullest extent we could when we were asked for staff, for information or for advice. Where temporary snags have arisen, as over some aspects of costing, I believe these have now been well resolved; and if by chance any still persist, I hope I may be told at once what they are, so that I may address them personally and urgently.

12. The major strength of the task-force concept lies in the fact that task forces can approach problems with a fresh eye and entirely from the collective and international viewpoint; they need not be weighed down by the weight of bureaucratic habit, of national instructions, of the pace of the slowest - all the things that experience shows can sometimes make the ordinary operation of the Alliance's machinery seem frustrating and disappointing. As a result, the Task Forces have a freedom that makes them admirably placed to act as catalysts - to jolt Alliance and national planning out of the ruts into which it may here and there have subsided. In order that the advantages of this freedom of working should have full rein, we in Britain - and I know other countries have done the same - have done our best to stay off the backs of the task forces, and not to try to back-seat-drive them or to invigilate their every move. It seems to me that the guidance for narrowing down developed

N A T O   C O N F I D E N T I A L

-88-



DRC/D(78)2

-89-

by the EWG and given in December in IPC/D(77)27 went as far as was right and helpful, and that closer surveillance or dictation would have been damaging. I hope and believe that this non-interventionist attitude has been the right one.

13. At the same time, it is only sensible to recognise that the very freedom that is the strength of the task forces carries with it corollaries which from another standpoint might prove weaknesses if we are not alert to guard against them. The first potentially awkward corollary is that apart from our particular national experts who have been following and contributing to the work of particular Task Forces (and in the UK, for our part, we haven't sought to back-seat-drive these experts either) we know as yet remarkably little, by normal standards, of what the task forces are finally going to come up with in terms of specific requests to specific nations. Four months from now our Heads of Government are going to be asked to address a set of proposals - perhaps diverse, wide-ranging and far-reaching, almost certainly posing competing demands on limited resources - which as of today our central defence planning and budgeting machinery cannot even begin to staff. Now while our procedural systems in Britain for defence decision-taking are not perfect, they are as good as most and better than some; yet we are certain to find them severely stretched by the demands the long-term programme is about to put upon them in preparation for Washington. I have no doubt that many - perhaps all - of the proposals that the Task Forces will make will be of high priority. But so is the provision, maintenance, support and re-equipment of forces already planned for commitment to NATO. It will often be a complicated business to assess the implications of finding room in national programmes for new measures, and to consider priorities between these and any elements of existing plans that would have to give way. I am not in the least afraid of making changes in plans. But existing plans mostly rest on some serious thought; and precise decisions to modify them wholesale may not be capable of being taken sensibly on the basis of a few weeks' staff work.

14. The other potentially awkward aspect is this. The factors which so often slow down the orthodox NATO machinery derive at least in part from the hard realities of the complex business of defence planning in a comprehensive national context. In being at least partly insulated from these slowing-down factors, the task forces may also, in a sense, have been partly insulated from those realities; and insulation from realities can produce - I do not say it must produce, because I know the task forces have been alive to the dangers - but it can produce planning that will simply not stand up in the long run.



15. Now I point to these potential dangers over time-table and soundness not because I believe they will materialise but because I believe we can and must ensure that they do not. I should like to offer some suggestions - inevitably in general terms - on how we can best do this. Let me make clear, in passing, who "we" are. I am not offering a didactic harangue to the Task Forces, or the International Staff and the IMS; the "we" I am talking about is all of us in the Alliance's defence planning community. We are all involved in this enterprise - its success or failure will be the success or failure of us all.

16. Firstly, I hope that the development of proposals can in general work with the grain of existing national force planning. I do not mean by this that the task forces must not propose changes of direction, or fresh priorities; clearly they must be free to do this, or the whole business will have been just window-dressing. I undertake that the United Kingdom for its part will be wholly ready to look with an open mind at suggestions that in the collective interest we ought to modify any of our present ideas. But the Alliance will not achieve the clear and concrete public success we all want in Washington if governments are caught cold in March or April by a shopping list that bears little relation to their current inventory of plans, intentions and possibilities. I am making, in essence, much the same point in relation to national plans as General Haig made on Monday in relation to SHAPE plans when he suggested that the product of the long-term programme "should blend with, and not eclipse, ongoing efforts". Summit success, it seems to me, will not always require startling new ideas or sensational new promises; the conversion of staff plans into public governmental policy will often be an important and positive achievement.

17. Secondly, we must not be too ambitious in the scope or the detail of the proposals that are put forward. I am not here talking mainly about money or affordability; as I have made clear, my country does not think it has to worry more about this than other Alliance members do. What I have chiefly in mind is proper depth of consideration. If, in a particular area, it proves impossible in the time available to put forward adequately-considered proposals, I am sure we all recognise that the temptation to fill the gap with inadequately-considered ones must be resisted. All the task forces have formidable assignments, but their fields differ in character, and the pace that is sensible will also differ both between fields and within them. I do not think all the task forces need reach the same stage, nor need they all



DOWNGRADED TO NC

SEE: DN(2005)0002

REF: (79)2

-91-

finish their entire task by the Summit. There will in May be a good many subjects where we will know that action is needed and the direction in which it should go, but where to say precisely what action is needed will require too much guesswork for safety. Let me give an example; I suspect that in most areas detailed proposals for particular inter-dependent procurement packages in terms of specific projects would probably be too precarious for governmental commitment in May. In this and in some other areas the wise objective for the Summit may be to establish a clear orientation and put political push behind it, rather than to plot a detailed course. What we want to do is to get things moving, to take at least the first step or the first few steps. We may risk endangering that vital beginning if we try too soon to define and ensure the tenth or the twentieth step.

18. Let me at the same time emphasise that we need not everywhere be afraid of firm commitment. As our Chairman's analysis made clear on Monday, different kinds of decision will be feasible and appropriate for different kinds of proposal. There will, I hope, be a good proportion of proposals on which we can go firm and specific; and indeed the more there are of these the better I shall be pleased. Given the time pressures of which we are all conscious, the sooner we can sort proposals out into the kinds of informal categories you foreshadowed, Mr. Chairman, the higher the chance of getting the right decisions taken. Countries must of course themselves get down quickly to judging which proposals they can make the subject of specific action promises and which can go no further, for the moment, than agreement on a broad collective orientation. But I hope that the Executive Working Group in co-ordinating proposals, and indeed the task forces in finalising their content, can help us rapidly with the process of sorting out. It would be a great pity if for lack of discrimination the summit decisions had to cast the shadows of caution, generality and individual reservation more widely than they really need to go.

19. If I may revert briefly to the areas where, I suggested, it will be impossible in the first round to plot fully detailed courses, I want to make it clear that I accept entirely that detailed courses will in due course be needed; and that brings me to the follow-through of all this work beyond the summit. I want to say briefly one general thing and one more particular one about follow-through.



N A T O   C O N F I D E N T I A L

-92-

DRC/D(78)2

20. The general one is that my country regards effective Alliance follow-through as absolutely crucial to the whole endeavour. I know this has from the start been in the mind of the United States as the main proponents of the programme, and it has our fullest support. A one-off public relations success in the summer of 1978, and a good report resting in the NATO archives, will not keep the Russians deterred in 1988; we want a continuing outcome that will.

21. The more particular point is about machinery. The task-force concept will remain valuable on a fire-brigade basis, and one or two of the individual task forces may well have unfinished business. The Executive Working Group itself will almost certainly have a continuing role to play in supervision and co-ordination. But I strongly share the hope of previous speakers that so far as possible the sustained development of ideas into detailed form, and the monitoring of implementation, can be directed back into the "mainstream" machinery of the Alliance such as the Military Committee, the MNC staffs, the Conference of National Armaments Directors, and the wide-ranging capability of the established defence planning cycle and the expert staff who service it. Special arrangements cutting across normal patterns can be very helpful, as indeed I am sure they will prove to have been in this instance; but if they are prolonged too far the law of diminishing returns and increasing dissipation of effort may set in. The orthodox machinery sometimes has limitations, as I acknowledged a little earlier; but if there is joint national will and effort - and the London and Washington summits should provide this - the proven and very extensive machinery of the Alliance's normal workings can be quite powerful and flexible enough to serve the Alliance's purposes effectively.

22. Let me conclude. I believe that the long-term defence programme enterprise is necessary and profoundly important, and that it can give a real imaginative lift and drive to all our work; it has certainly put people on their toes throughout my own Ministry of Defence. I believe that the progress so far in its development is along the right lines. If we raise our expectations too high - if we look for exact or detailed commitments on a wider scale or of a more revolutionary kind than is sensible in the time available, whether relating to the area of force improvements or to that of procurement decisions - I believe we risk disappointment. But if we set our sights realistically, and are prepared to give full weight to the need to improve the collective posture of NATO as a whole, I believe that we shall find much that we can do, individually and as a team. I believe that our Heads of Government will be able in Washington to agree on setting in motion an invaluable series of improvements to NATO's capability for the 1980s and beyond: and that we can thereby enhance on a sound and lasting basis our deterrent strength, our willingness to work together; our confidence; and our cohesion.

N A T O   C O N F I D E N T I A L

-92-

N A T O   C O N F I D E N T I A L

-93-

DRC/D(78)2

Experience gained by NATO Nations with the Application  
of the Long-Term Defence Program - German Experience

by

Brigadegeneral von Bornstaedt,  
Assistant Chief of Staff (VI),  
Armed Forces  
Ministry of Defence, Bonn.

N A T O   C O N F I D E N T I A L

-93-



I. General Introduction

I am glad to have the privilege of talking to you at the now almost traditional NATO Defence Planning Workshop and Symposium here in Oberammergau.

I stand in for Dr. Stütze, the Chief of the Planning Office of the Federal Ministry of Defence, who very much regrets that he is unable to come himself and has asked me as the Assistant Chief of Staff for Planning in the Armed Forces Staff to speak to you in his stead.

Before I begin I would point out one limitation inherent in my subject: Lessons learned by a country, such as the Federal Republic of Germany, in applying the long-term defence programme of NATO cannot really be described and evaluated against the background of national planning unless one knows exactly what are the requirements of NATO that national planners are expected to meet. So far this is not the case as far as the new initiatives are concerned which were agreed at the meetings of heads of state and government in London and of defence ministers in Brussels in May 1977. The task forces have not yet come up with any specific proposals and recommendations indicating the national involvement required. Until now, therefore, no definitive and politically binding decisions could be taken.

General Dimensions of the Subject

This is a very important point. Therefore, the aim cannot be to study the compatibility of long-term national defence plans as far as we know them with specific measures adopted under NATO common improvement programmes. At best, one can try to discuss the more general interrelations of the two levels of planning, that is national and NATO planning, and to sound them for areas of possible conformity or difference against the background of fairly reliable predictions about the likely political and financial parameters in the 1980s.

The efforts to adapt NATO to the requirements of the 1980s through collective action reflect a very serious political commitment. It is, however, quite legitimate to express doubts about the eventual chances of success of the exercise. Criticism is a challenge to make even greater efforts to achieve the desired goal.

DEC/D(78)2

-95-

The long-term defence programme for the 1980s must not be a repetition of the AD 70 experience. The initiatives of the summit meeting in London of May last year contain a much greater challenge for all of us in order to achieve the common goal, that is, the strengthening of the Alliance.

II.           What is the political aim of NATO's long-term defence programme?

The idea is to determine the defensive capabilities the Alliance needs to implement NATO's strategy of flexible response in order to maintain a credible deterrent in an era of strategic nuclear parity.

Stable deterrent structure

A stable deterrent structure based on a capacity for defence and a determination to defend ourselves remain a vital prerequisite for continued peace and freedom. The basis of deterrence and defence and thus a condition of the effective operation of NATO's strategy is a balanced force relationship. It was with good reason that Herr Schmidt, the Federal Chancellor, said in London on 28 October 1977: "The political and military balance is a condition of our security and no-one should delude himself into believing that there might be something which would permit us to neglect the maintenance of that balance."

What then does the balance of power look like?

Overall, the United States and the Soviet Union are on a par in terms of strategic nuclear capabilities though one side or the other may have a lead in specific areas. But the West is definitely at a disadvantage as regards medium-range nuclear capabilities.

As regards ground and naval tactical nuclear forces, the two sides are roughly equal.

An aggregative comparison of medium-range nuclear capabilities and tactical nuclear capabilities in the European theatre (theatre nuclear forces) suggests a clear Warsaw Pact lead if, as is likely, the Soviet Union steps up the expansion of her capabilities.

In the conventional field, the Warsaw Pact has a clear superiority as we all know. It has further expanded the offensive capabilities of its ground and air forces and, on



N A T O   C O N F I D E N T I A L

-96-

DEC/D(78)2

top of that, has increased its air and ground transport capacity. All this contributes to increase our fear of an attack after short warning time.

The disparity in medium-range nuclear capabilities and conventional forces must be overcome if serious consequences for the security of Western Europe and thus of the Alliance as a whole are to be avoided.

We can try to achieve this goal by expanding our own capabilities and/or through disarmament and arms control. The second option, of course, depends on the readiness of the other side to reduce the existing disparity and to accept the principle of parity in respect of medium-range nuclear capabilities and conventional forces as it has accepted it in the SALT context.

So far it has shown no inclination to do so. Therefore, there is no reason why our long-term plans should be designed as though our arms control efforts were certain to produce results that would justify specific modifications in our plans at this time. From the point of view of NATO, the need to strengthen the conventional component of the triad is particularly urgent. Due priority must be given in planning and procurement to increasing the importance of the conventional forces as a deterrent.

If the Alliance succeeds in improving its conventional posture, it will have a wider choice of options. It would have the initiative to escalate at the right time instead of having escalation forced upon it when it is of no advantage to NATO. An improved capability for conventional warfare might add to deterring the East from starting a war whose duration and outcome are uncertain.

If deterrence fails, a long-drawn-out conventional war causing destruction on such a scale that our very existence would eventually be in jeopardy is not an acceptable way of defending Europe.

Therefore, the linkage between the deterrent and defensive capabilities of the conventional forces and the nuclear option must not be abandoned even if the balance of power should shift to our advantage.

N A T O   C O N F I D E N T I A L

-96-

DRC/D(78)2

-97-

However, an adequate strengthening of the conventional forces consistent with the agreed strategy of NATO will contribute to our collective security and diminish the risk of nuclear escalation on either side of the Atlantic thereby maintaining the credibility of the U.S. nuclear deterrent.

Let me now go on to discuss in what way we are planning at the national level to contribute to strengthening NATO's conventional posture.

### III. German Planning

The Federal Republic of Germany has long been aware of the need for an improved conventional posture. This awareness has guided our planning in anticipation, as it were, of the London and Brussels decisions of May last year and led to substantial expenditure on defence research and development. As a result, almost all major branches of the Federal Armed Forces have by now been equipped with a new generation of modern high-performance weapon systems and equipment.

However, combat effectiveness is not just a matter of having high-grade weapon systems; we must also be able to use them effectively and maintain them properly. Therefore, we are constantly faced with the task of maintaining a reasonable balance between capital expenditure and operating and maintenance cost.

Let me now put in a few remarks on the basis and methodology of German force planning.

On the basis of the political goals of the Federal Government, the Federal Minister of Defence issues the long-term Defence Policy Guidelines (DPG).

Acting on this guidance, the Chief of Staff of the Federal Armed Forces as the highest military authority under the Federal Minister of Defence develops an overall concept of military defence, the Military Strategic Concept (MSC), which is the basis for our long-term planning as reflected in the Force Plan.

The medium-term part of our force plans is included in a Five Year Programme (FYP) which is updated and rolled forward annually. It corresponds to the Medium-term Financial Plan (MTFP) at the fiscal level.



The individual projects and especially the equipment projects have to be fitted into this system of plans /which, incidentally, is the job of the Planning Division of the Armed Forces Staff which I represent/.

We have very little latitude in planning the allocation of funds to the operation of our armed forces. As regards capital expenditure, the situation is like this: Almost 90 percent of expenditure projected for the time up to the mid-1980s is firmly allocated in principle to specific projects. The rest is intended for projects which the Service chiefs of staff and heads of ministerial divisions responsible for planning consider necessary to maintain the operational readiness of the armed forces but which have not yet been approved by the Minister.

#### Alternative Projects

In fact, we practically do not have a clear choice of alternative concepts until the latter half of the 1980s. Consequently, the projected future expenditure on research and development is principally geared to the requirements of the time after 1985. So it is important that specific equipment proposals under the new initiatives should be clearly identified very soon to have a chance of being considered. The understandable wish for maximum flexibility in planning is thwarted by the facts stated which, in turn, are a result of the time required to design new weapon systems and, in a way, also of the principle of system replacement.

Wherever we can we endeavour to reach the goal of threat-oriented and task-related interservice planning that also considers the battlefield of the future and takes account of new tactical concepts.

We ascribe a large measure of importance to the EUROLONGTERM subgroup of the EUROGROUP. It is indeed tremendously important that all military services jointly charged with performing a military task be included from the very beginning in developing common tactical concepts.

#### Principal aspects of the equipment programme

I am now going to touch briefly upon the principal aspects of our Five Year Programme. Alone between 1970 and 1977, the development expenditure preceding this programme amounted to almost 10,000 million DM. It involves the

SEC/D(78)2

-99-

development and the onward development cost for the LEOPARD 2, the anti-air armoured vehicles ROLAND and GEPARD, tube and missile artillery systems, and the TORNADO and ALPHA JET combat aircraft. In addition, new ships such as the Frigate 122 and the systems necessary for their protection are being developed. New surveillance, command and control, and information systems and electronic warfare resources are also provided.

The majority of these projects are currently in the production phase. That implies an increased effort on our part to defray the production costs.

Let me cite some specific projects from the medium-term equipment programme of the Bundeswehr: 1,800 LEOPARD 2 main battle tanks will be procured at a cost of 6,500 million DM.

650 M 48 tanks will be upgraded by mounting the better 105 mm gun; their combat effectiveness will thus be enhanced considerably.

432 GEPARD self-propelled anti-aircraft armoured vehicles are in the delivery phase. The cost of this programme is 3,700 million DM.

Our air defences are being augmented by 140 ROLAND surface-to-air missile systems and the requisite missiles, valued at a total of 2,800 million DM.

316 missile-equipped tank destroyers are being converted to the HOT weapon system. The total cost is nearly 1,100 million DM.

212 antitank helicopters having a value of more than 1000 million DM including the missiles HOT, are being procured to improve our anti-armour capability.

A further antitank weapon system called TOW will require an expenditure of 390 million DM.

A total of 2,500 MILAN launchers will be bought. Together with the requisite missiles this costs about 3,400 million DM.

MILAN, HOT and TOW will combine to form a new anti-armour weapon generation totalling more than 3,100 systems; this compares well with the present number of 600 systems.



N A T O . . C O N F I D E N T I A L

-100-

DRC/D(78)2

175 ALPHA JET aircraft will be introduced in the German Air Force at a cost of 3,400 million DM.

Additional 16,500 million DM will be spent on 322 TORNADO aircraft, 210 of which are earmarked for the Air Force and 112 for the Navy.

2,200 million DM will be needed to procure the first lot of 6 Frigates 122.

I have discussed only the focal points of our equipment procurement programme whose implementation will generally be concluded by the mid-nineteen-eighties. Several weapon systems will not be completely fielded even until after that time frame, while new programmes are already emerging. I am referring primarily to anti-air weapon systems. The Federal Republic of Germany attributes paramount importance to the integrated air defence and the maintenance of the belt concept.

#### Task Force 5: Air Defence

Not only will we have to finance the investments I have just outlined; we must also provide the necessary qualified manpower. The new equipment is more sophisticated in terms of development and production, it is more expensive than its predecessors, and it places enormous demands upon the training of our troops, their organisational adaptation, and finally upon its operation and employment.

We must not neglect to think of all these points as well when considering the adoption of additional tasks and programmes.

#### Force Structure

That is exactly what we did when we set up an improved force structure. I am certain that that new structure will enable us to meet the increased requirements our troops will have to cope with.

The superior objective of the new force structure is to enhance our combat effectiveness, especially our anti-armour capability and the posture of combat forces-in-place of the Army. Smaller and more easily controllable units, greater mobility and flexibility and a higher degree of fire-power are the governing features of the new structure.

N A T O . . C O N F I D E N T I A L

-100-

DRC/L(78)2

-101-

Task Force 3: Better Utilization of Reservists

A better utilization of reservists and their outfitting with materiel no longer used by the Army Field Forces will provide for more effective mission accomplishment by the Territorial Army, whose task is to safeguard the operational freedom of action of the NATO forces.

Task Force 1: Readiness

Studies are under way to ascertain whether additional units can be set up from the available reservoir of reservists; such units would be tasked with reinforcing both rear area units and the assigned forces committed to forward defence. A further point of these studies relates to the question whether our home defence groups should be upgraded, that is whether they can be grouped in the category of assigned forces.

Financial and manpower constraints are obvious, especially when new units are to be activated. For these call for additional material and manpower in peacetime for equipment and cadre units. The actual strength of the active units must not be affected by these measures, however. In addition, more infrastructure will be needed for depots and training facilities, and logistic requirements will also increase. All this calls for difficult decisions by our politicians.

A better utilization of reservists is not specifically a German problem. All European NATO countries should, therefore, give their thought to various possibilities of employing their reservist personnel in order to improve their conventional posture. I believe that common programmes could serve to mitigate the financial burden in peacetime.

Standby Readiness

The standby readiness component in the Bundeswehr is an effective instrument for calling up reservists quickly. It enables the Federal Minister of Defence to call to the colours, even prior to general mobilization, such reservists who have lately completed their military service.

Short-term Measures

The overall programme which I have outlined to you will also cover the short-term improvements required of the Federal Republic of Germany under the New Initiatives.



N A T O   C O N F I D E N T I A L

-102-

DRG/D(78)2

The Federal Republic of Germany has already made the political decision pertaining to the measures required of her in the fields of anti-armour weapons and ammunition stockpiling. NATO requirements on the one hand and national planning on the other have proved to be largely identical.

Cooperation Criteria for Long-term Measures

Under this positive aspect we will also cooperate in the long-term defence programme. Judging from the current status of work in the task forces, the Federal Republic of Germany will be able to fulfill her share of the likely requirements.

All German agencies and organizations involved in this cooperation have been given a set of implementing instructions, prepared last year by the Minister of Defence, together with the Foreign Minister, in the form of political guidelines. These guidelines provide that our cooperation be geared to 4 main criteria:

The first criterion is the conduct of a successful Forward Defence, which is of vital importance to the Federal Republic of Germany.

Owing to its high degree of industrialization and the density of its population, Western Europe is particularly vulnerable. Furthermore, it lacks geographic depth which would sustain the temporary loss of territory in the course of defence actions. This applies above all to the Federal Republic of Germany which shares her boundary with the Warsaw Pact over a length of 1,700 km. The industrial structure of the Federal Republic of Germany and the unfavourable ratio between her north-to-south and east-to-west dimensions, i.e. its lack of hinterland, prohibit the relinquishing of any of her territory. More than 30 percent of her population and 25 percent of her industrial capacities are located within a 100 km wide stretch west of the GDR boundary.

Forward defence is an absolute necessity from both the political and military point of view. Since NATO is a defence alliance, it is the Warsaw Pact which can determine time and place of the outbreak of a military conflict. To sustain its credibility it is, therefore, especially important for NATO to offset these military disadvantages as far as possible. To achieve this, the Alliance requires certain capabilities:

N A T O   C O N F I D E N T I A L

-102-

N A T O   C O N F I D E N T I A LDAC/L(78)2

-103-

Firstly: An early warning system capacity which, in times of crisis, leaves more time for political efforts towards solving the conflict and/or for introducing re-inforcements.

Secondly: Forces in place which are capable of

- countering limited attacks, and
- of containing the first echelon of a large-scale aggression so as to enable the Alliance to mobilize its reservist manpower, introduce re-inforcements and - if necessary - to make decisions regarding the use of nuclear weapons.

The second criterion is the need to start increasing both the force levels and their combat effectiveness in times of political tension. Political conditions and financial constraints limit the armed forces' size. Structure and organization of the existing forces must be such as to permit exploitation of the warning period and - prior to the outbreak of military conflict - a rapid augmentation to fully operational combat formations. Our standby readiness system is a component to be mentioned in this connection.

This leads us to the third criterion. It is the need for an improved crisis management and the capability of quicker political and military reaction. This calls for our readiness to exploit warning periods. Flexible improvements of the degree of readiness carried out, for instance, in response to non-routine activities on the part of the other side is a means of deterrence.

The fourth criterion is a greater exploitation of the resources of every one of the nations with a view to supporting their force augmentation capabilities. This must not be a task left to the Federal Republic of Germany and the United States alone. The Alliance as a whole will have to honour the readiness of the United States - announced by Defence Secretary Brown in the LPC last month - in the future to double the number of its divisions in Europe within a 10-day span of time and triple the tactical air forces within a week.

This intended American contribution must be taken as a signal to be followed by all member countries of the Alliance.

N A T O   C O N F I D E N T I A L

-103-



Burden-sharing

Fair financial burden-sharing is indispensable to the Alliance. It is the only means of avoiding both disproportionate demands and burdens placed on individual partners and the danger of jeopardizing the Alliance's internal political balance.

Therefore, the Federal Republic of Germany will always see to it that its contributions to the Alliance will have a stabilizing as well as integrating effect. Furthermore, placing much higher demands on this country's citizens than in the past would not be acceptable for domestic reasons.

Integrating effects of contributions to NATO are also being achieved by intensifying the practical cooperation among the European partners. French participation should be sought so far as this is possible.

Notably the possibilities of defence equipment cooperation among the European nations and between Europe and the United States must be exploited, though of course on the basis of realistic expectations. By now we are almost flooded with models conceived to improve cooperation in the defence equipment field. Many of them do not stand the test of even a cursory examination, mainly because their inventors expected too much of them.

Task Force 8: Rationalization, Standardization

In my view, it would, however, be necessary to investigate the concept of "NATO weapons families" as a new approach to cooperation. We should consider whether it would in fact be advisable to integrate individual weapon systems required to perform a defence function into one weapon system family and then treat that family as a cooperative project. This type of inter-project procedure could help to reduce the number of difficulties involved in single-weapon projects.

I find it embarrassing that time and again we implore the Alliance to exploit its capability of cooperation. For, in view of all the efforts made, we start pondering the question of what must really happen before the Alliance is ready to embark upon a genuine improvement of cooperation - although it has agreed in principle to a common goal - namely to drive for standardization and/or interoperability.

N A T O   C O N F I D E N T I A LDRC/D(78)2

-105-

The requirement for political solidarity within the Alliance on the one hand and shortage of resources on the other suggest that the necessary improvements be achieved by arranging as many common programmes as possible.

Task Forces 8 & 9: Standardization, Logistics

This does not imply that common funding should be the rule. Common funding should be sought only if and when it is the only meaningful and proper way to solve the problem. At this juncture, let me mention NATO infrastructure planning - an almost traditional example of this concept. But we should also examine analogous cases and start in time to develop criteria that are acceptable to all NATO nations and applicable to projects of such nature. Had such criteria been developed and accepted by the partners to NATO, we would have less difficulties in solving the AWACS problem for instance - a typical collaborative project requiring common funding.

IV. Détente

I would omit an important point of the subject if I were to leave out the second pillar upon which NATO's dual strategy rests: I am referring to détente, which aims at achieving a state of world-wide pacification. This is a concern of vital importance which leaves no alternative to a policy that has been legitimized by democratic procedures.

Concerning the military part of détente everybody expects the two world powers to continue their talks on the limitation of strategic nuclear weapons and their reduction and to reach an agreement which will safeguard the unrestricted security interests of all concerned.

No doubt it means facing a dilemma if one wishes to meet this moral challenge but is forced, nevertheless, to maintain deterrence by the need of providing and improving both nuclear and conventional weapons of an enormous destructive power. Obviously, this dilemma forms part of the political conditions which set the frame for the realization of NATO long-term improvement programmes.

At the NATO Summit Meeting of last May, Chancellor Schmidt said in London that theoretically there were two approaches open to achieve conventional parity with the Warsaw Pact countries: The Western Alliance could turn to a massive expansion of its armaments and greatly increase its manpower ceilings. But it would also be possible to reduce the armed

N A T O   C O N F I D E N T I A L

-105-



N A T O   C O N F I D E N T I A L

-106-

LPC/D(78)2

forces of both sides, thus lowering the levels of collective common ceilings. We are bound to give preference to the second alternative. For an arms race would not reduce the dangerous disparities in the relative East-West force capabilities.

Our security-political thinking, our planning and our attitude must be in keeping with the principle of détente in every phase in order that we do not forego the slightest chance of arms limitations. On the other hand, however, such an approach certainly excludes carelessness or a slackening in vigilance where our security is at stake.

V. Having said all this as far as general security political issues are concerned I will now turn to some concrete aspects of our common further work.

Prospects of the Spring Conferences

What can we realistically expect so far as decisions are concerned which the ministers of defence and subsequently the heads of state and government are to reach in the spring of 1978?

LPC Communiqué, item 4

For a limited number of identified areas of defence planning, where joint measures are urgently required, the defence ministers approved - on 6 and 7 December 1977 - the priority categories of measures upon which attention is to be focussed in the development of joint and coordinated medium/long-term defence programmes.

Procedure until spring 1978

It will certainly be difficult to develop and propose priority programmes of this type in a rather short time frame, because concrete proposals, together with cost estimates were to be addressed to the individual countries in the Alliance which are to implement these proposals, either alone or together with other nations, as joint programmes. All this requires political and financial decisions which cannot be reached overnight. Within the nations, interdepartmental coordination will be necessary, since the ministries of defence share this responsibility with other departments. After having developed and adopted national procedures, the proposals should be returned to NATO for discussion in such bodies as the Military Committee, Executive Working Group, DPC.

N A T O   C O N F I D E N T I A L

-106-

N A T O   C O N F I D E N T I A LDPC/D(73)2

-107-

I have my doubts, ladies and gentlemen, whether all this can be done by April/May of this year, which is about three months from now. Desirable as such a rapid pace and decision-making may be to maintain the momentum and to launch these improvement measures with vigour, it is of no use to rush forward and precipitate decisions which later will not be taken seriously because they had not been duly prepared in the first place.

There are two things which I deem important:

First: Concentration upon the identified high priority areas, as directed by the ministers of defence, cannot be taken seriously enough.

Second: Our prospects for decisions in the spring must remain realistic. They must yield the joint decision to implement programme proposals then available for the improvement of the NATO posture in a spirit of collective defence and a coalition strategy.

What we should not expect are commitments and obligations in respect of individual actions in the far future. There are still too many uncertainties: uncertainties in the cost estimates, for instance, and unpredictable national developments until the late eighties and beyond.

In our planning we have the strategic framework which can be considered a constant value. It should serve as guideline - even for the longer time frame. On the other hand, however, we have to cope with such variables as finances, technology and manpower. Uncertainties in this area and the related constraints obviously make firm commitments over a longer period of time more difficult. This, by the way, leads me to a question of the methodology of planning. Let us assume that in spring we shall be faced with a number of long-term programme inputs which go beyond the time frame of the five-year NATO force planning cycle - how exactly shall we deal with these inputs in our planning? The NATO planning document DPC/D(71)10 does not provide us with an answer to this question. The old discussion whether or not the NATO force planning procedure should be supplemented may emerge once more.

N A T O   C O N F I D E N T I A L

-107-



DOWNGRADED TO NC

SEE: DN(2005)0002

-108-

LEC/D(78)2

In conclusion let me say this:

I believe that through carefully selected improvement programmes whose validity should be underlined by the heads of state and government at the 1978 NATO Council Summit Meeting in Washington, the political resolve of the Alliance and the credibility of its strategy must be convincingly manifested. That will be the signal cautioning the other side against underestimating the solidarity and resolve of the Alliance to defend itself.

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIE - MISE EN LECTURE PUBLIQUE

**NATO SECRET**

DOWNGRADED TO NC

SEE: DN(2005)0002

DECLASSIFIED - PUBLICLY DISCLOSED - PDN(2013)0006 - DECLASSIFIE - MISE EN LECTURE PUBLIQUE

**NATO SECRET**