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Preface

The Cold War is over. Confrontation has been replaced by dialogue; deadlocked disarmament talks have given way to measurable progress, as evidenced in the Vienna talks about Conventional Armed Forces in Europe (CFE), which involves the 16 NATO allies and the seven members of the Warsaw Pact, and in the Strategic Arms Reductions Talks (START) in Geneva. Moscow's call for 'defensive defence' and its notion of 'reasonable sufficiency' has been accepted as a genuine Soviet objective in many Western political and military circles. Clearly, the dramatic events now taking place will change the international security order, though the nature and the degree of change cannot be predicted with certainty.

So far, disarmament talks have focused primarily on the central strategic balance between the superpowers and the conventional balance in Central Europe. Although Northern Europe, including Norway and its adjacent territory, has been dealt with, this has only been done in a peripheral and indirect way. In particular, the disarmament talks have not addressed the peculiarities of the situation in Northern Europe — peculiarities that derive from a particular configuration of opposing forces in this part of Europe. Moreover, whereas the erosion of the Warsaw Pact will change the correlation of forces in Central Europe, parts of Northern Europe will not be affected by these events. It is these facts that provide the background for this study, a study which I have had the pleasure to coordinate and edit. The study has been written by a group of people uniquely qualified to analyse the problems and issues in the area.

The object of the study is to examine what sort of disarmament and confidence-building measures need to be implemented in the North in order to maximize regional stability in general and, more specifically, to reduce the offensive potential of opposing forces in particular. The study has focused particularly on those forces that

have a direct bearing on Norway. Given that the most substantial force concentrations in the area are Soviet in origin, the focus throughout this study has primarily been on these forces.

Progress already made in the current round of disarmament talks means that one cannot preclude further dramatic reductions. This makes it particularly difficult for anyone to engage in crystal-ball gazing. This study, therefore, concentrates on what may be called a medium-term perspective; that is, approximately five years. The contributors agree that the measures proposed in this study can be implemented within this time period. All contributors accept the principal arguments and conclusions arrived at in the study.

Rolf Tannes
June 1990

Contributors

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Guard, the Brigade in North Norway and Headquarters Defence Command Norway. In 1988-89 Dalhaug was a Military Research Associate at the Norwegian Institute for International Affairs (NUPI), specializing in conventional disarmament in Europe. In connection with this posting, he wrote «Conventional disarmament in Europe and consequences for Norway», *NUPI Report*, (No. 135, September, 1989). Major Dalhaug has also contributed numerous articles to the defence debate. He is also a member of IISS.

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Rolf Tamnes

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Introduction

In Vienna, March 9, 1989 both NATO and the Warsaw Pact (WTO) tabled their proposals for the implementation of conventional force reductions in Europe. The common objective of the negotiations is to enhance military stability in Europe from the Atlantic to the Urals (ATTU). This is to be achieved by eliminating, as far as possible, the capability for launching a surprise attack and initiating large-scale offensive operations. In order to remove the disparities prejudicial to stability, equal ceilings for armaments with explicit offensive potential will be set. The principal categories of armaments to be limited are: tanks, artillery and armoured troop carriers, and also land-based combat aircraft and combat helicopters. U.S. and Soviet ground forces stationed outside their respective countries have also become objects of negotiation. The principle of asymmetrical cuts ensures that those countries with the highest number of systems in each of the categories outlined above must implement the largest cuts.

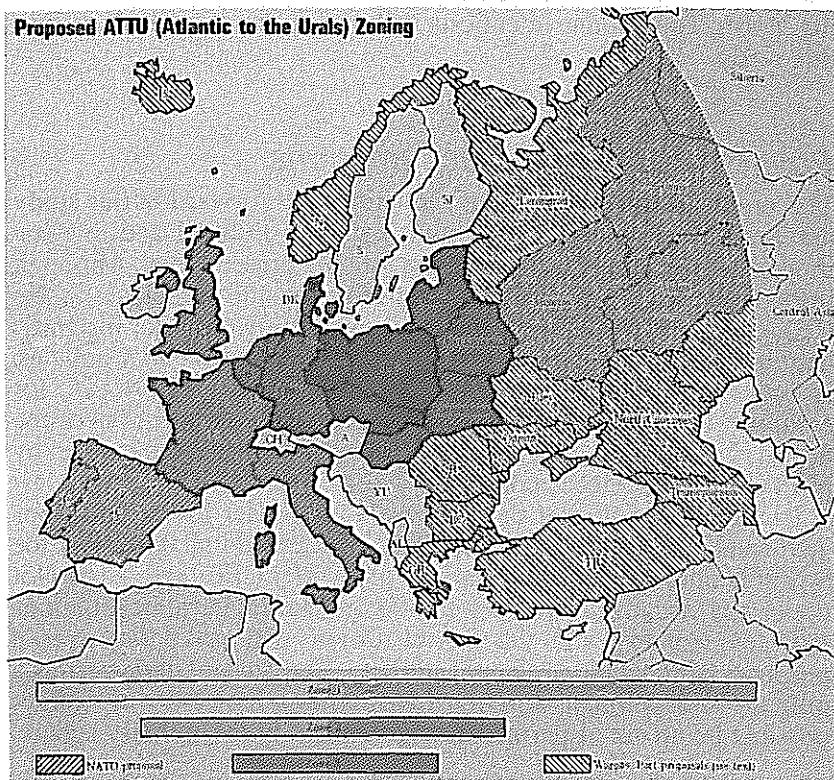
Norway's situation

It is commonly assumed that in the event of a conflict erupting in Europe Soviet forces on the Kola peninsula would be in a position to conduct combined operations by land, sea and air against territory in northern Norway. During the first days, or possibly weeks, of a conflict, southern Norway would not be under direct threat. Soviet forces available for deployment against South Norway during the early stages of a war would consist of aircraft, some long-range delivery weapons and smaller units engaged in sabotage or commando-type raids. Only after a breakthrough on the Central Front, and after the fall of Denmark, can one envisage a transfer of forces of combined arms over Skagerrak to South Norwegian territory. It is our opinion that successful CFE

negotiations will further reduce the capacity of the USSR to gain objectives in southern Norway using army units transported by sea. It is, however, less clear how a CFE-treaty as presently envisaged will affect Soviet force deployments in the Leningrad Military District in general, and on the Kola peninsula in particular. There are two reasons for this uncertainty. First, it is unlikely that the final treaty will define specific ceilings for each of the categories listed above to be applied specifically within the Leningrad military district, including, for example, separate sub-ceilings for combat helicopters stationed on Kola. Second, the CFE negotiations only concentrate on a limited number of aircraft and arms categories. Most of the weapon systems in these categories are to be found in tank and motor rifle divisions. These units have, relatively speaking, a greater offensive potential on the Central Front than they do on the Northern Flank. This is not to say that a reduction in the number of Soviet tanks in the Leningrad Military District will not benefit Norway. However, when the topographical factors are taken into account, other types of units and different categories of weapons are clearly equally crucial in terms of determining the outcome of a Soviet offensive against North Norway. More specifically, one should be more concerned about bridging-material and specially-constructed ferries, amphibious personnel carriers, landing craft for amphibious forces and airborne, air assault units, and sea lift capacity in general.

Some disarmament proposals, whose area of application would include the Leningrad Military District, have recently been coming from the Soviet side. Common to all these proposals, however, is a lack of detail, which in turn precludes a thorough evaluation of their significance as far as the balance of military forces in the region is concerned. For example, during the course of Gorbachev's visit to Finland in October 1989, the Chief of the Soviet General Staff, General M. Moiseyev, declared that the Soviet Union will reduce its armed forces in the North Western part of the country by 40,000 men and 1,200 tanks, as well as by a «considerable» amount of artillery. This is probably meant to include both the Leningrad and the Baltic Military Districts, but this has not yet been clarified. It is evident that one cannot evaluate the military significance of a proposal couched in these general terms.

The military situation on the Soviet side has yet to be affected by political developments in Europe. The Soviet Union continues to modernise the Northern Fleet and has not conducted any verifiable reduction of ground forces. There is moreover little likelihood of political developments taking place along the lines of what has happened in the Baltic states. The Kola peninsula is recognized Soviet (Russian) territory. Thus, for the foreseeable future, it would appear that the military situation in Northern Europe will remain largely unchanged.



Source: International Defense Review.

Purpose of study

The purpose of this study, therefore, is to examine what sort of military reductions the Soviet Union needs to implement in the Leningrad Military District in general, and on the Kola peninsula in particular, and for us to evaluate whether the capacity to invade Norwegian territory has been appreciably reduced. Clearly, one cannot divorce the dangers and the discussion of an invasion of Norwegian territory from a larger consideration of East-West *political* developments. In this study, though, we are confining ourselves to the threat posed by the Soviet military capabilities in the North. To examine intentions will therefore not be dealt with in this study.

Political context and assumptions

The proposals for Soviet force reductions put forward in this study are predicated on the assumption that both Finland and Sweden maintain their defence effort at roughly the present level. Although these countries are neutral, and therefore do not participate in the CFE-talks, their military forces and dispositions are not insignificant in the formulation of Norwegian defence and security policies. A reduction in the Finnish and Swedish defence effort can, for example, lower the hedge to an attack against either NATO or the Soviet Union, and thereby cause a compensatory increase by NATO or the Soviet Union in the North.

It is our opinion that the proposals for Soviet force reductions advanced in this study can either be implemented unilaterally by the Soviet Union, or they can form part of a wider CFE II package. Not under any circumstances do we envisage that bilateral negotiations between Norway and the Soviet Union will serve the overall purposes of enhancing regional stability. The Soviet Union carries a military and political weight which ensures that Norway cannot possibly be an equal partner in negotiations in the military sphere.

Strategic forces

The Soviet Union considers its SSBNs and related base installations as well as other major categories of weapons and installations on the Kola peninsula integral to the central strategic balance with the United States. This gives the region and the forces stationed there an added importance over and above their importance in the local and regional context.

It is reasonable to assume that the size of strategic forces on the Kola peninsula will remain a function of Soviet assessments of the importance of these forces in relation to the strategic balance with the United States. It is important, therefore, when seeking to determine a reasonable and sufficient level of Soviet forces in the vicinity of Norwegian territory to take as a point of reference the likely development of U.S. strategic forces, particularly those that may be seen to pose a threat to the Soviet Union in the Northern Region.

One factor which is likely to have a considerable impact on the size and composition of Soviet forces in the North, is the outcome of the ongoing START negotiations. Another important factor will be the allocation of resources to defence in the United States. American defense expenditure will in turn be a function of developments in the Soviet Union, as well as of Congressional pressures for a balanced budget.

Assessing the development of U.S. strategic forces over the long-term is inevitably going to be hampered by the elements of uncertainty alluded to above. Bearing this in mind, it might still be useful for the purposes of this study to speculate on the possible courses of development.

At the Reykjavik meeting in October 1986, President Reagan and Party leader Gorbachev reached a basic understanding on the scope for a strategic arms deal. They reaffirmed the decision from Geneva a year earlier that a 50% cut of strategic forces should

Strategic nuclear forces of the Soviet Union

Breakdown of Soviet Forces

ICBM and SLBM warhead levels are based on counting rules established at the December 1987, US-Soviet summit in Washington, D.C. SLBM levels include missiles aboard 62 submarines: 15 YANKEE I, one YANKEE II, 18 DELTA I, four DELTA II, 14 DELTA III, five DELTA IV, and five TYPHOON class submarines. Sixty of these submarines are operational and two have begun sea trials. Also included are six SS-N-8 missiles on one Hotel-class submarine. Bomber levels include 160 TU-95 BEAR bombers and 10 TU-160 BLACKJACK bombers. Eighty-five TU-95 bombers carry between two and four weapons per aircraft, either bombs or

air-to-surface missiles. Seventy-five BEAR-H bombers are assumed to carry six AS-15 ALCMs each. Ten BLACKJACK bombers are each assumed to carry up to 24 bombs or air-to-surface missiles. Excluded are 15 MYA-4 BISON bombers and 321 non-SALT-accountable TU-26 BACKFIRE aircraft, over 160 of which are assigned to Soviet Air Armies and the remainder to Soviet Naval Aviation. The Soviet Union maintains its strategic forces at a relatively low level of readiness, with no bombers on alert, a relatively small percentage of its ICBMs ready for immediate launch, and only about 20 percent of its missile-carrying submarines on station or in transit.

USSR ICBMs	Launchers		Warheads
SS-11	376	x 1	376
SS-13	60	x 1	60
SS-17	108	x 4	432
SS-18	308	x 10	3,080
SS-19	330	x 6	1,980
SS-24	50	x 10	500
SS-25	144	x 1	144
Sub-Total: 1,376 [1,398]			Sub-Total: 6,572
<hr/>			
USSR SLBMs			
SS-N-6	240	x 1	240
SS-N-8	286	x 1	286
SS-N-17	12	x 1	12
SS-N-18	224	x 7	1,568
SS-N-20	100	x 10	1,000
SS-N-23	80	x 4	320
Sub-Total: 942 [920]			Sub-Total: 3,426
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USSR BOMBERS			
TU-95H (6/ALCM)	75	x 6	450
TU-95A (2/SRAM)	15	x 2	30
TU-95B/C/G (4/SRAM + bombs)	70	x 4	280
TU-160 BLACKJACK (24/SRAM + bombs)	10	x 24	240
Sub-Total: 170			Sub-Total: 1,000
Overall Total: 2,488 [2,484]*			Overall Total: 10,988**

* Soviet SLBM totals do not include 36 non-SALT accountable SS-N-5 missiles on 12 conventionally powered GOLF-II submarines. Soviet bomber totals exclude about 15 MYA-4 BISON bombers which are under dispute. The United States believes the bombers remain SALT-accountable; the Soviet Union claims they have been converted to refueling tankers and should not be counted.

** Weapons totals are based on counting rules agreed at the US-Soviet summit in Washington, D.C., December 7-10, 1987. Warhead numbers do not include Soviet long-range SLCMs or weapons aboard Soviet BACKFIRE aircraft. Bomber loadings are based on aircraft carriage capability. Actual operational loadings are likely to be lower.

Strategic nuclear forces of the United States

Breakdown of US Forces

ICBM warhead levels assume 450 MINUTEMAN II, 1,500 (500 x 3 MIRV) MINUTEMAN III, and 500 (50 x 10 MIRV) MX warheads; SLBM levels include 14 POSEIDON submarines carrying 16 C-3 missiles each with 10 warheads per missile; 12 POSEIDON submarines carrying 16 C-4 missiles each with eight warheads per missile; and eight TRIDENT submarines carrying 24 C-4 missiles each with eight warheads per missile. Bomber levels include 194 B-52 and 93 B-1B bombers in the active inventory. Four additional B-1Bs are considered test aircraft, two of which have been equipped with ALCMs. Bomber loadings assume 4,808 weapons (1,736 spaces for ALCMs and 3,072 bombs and

SRAMs. In actuality, only 1,614 ALCMs will be available for deployment until 1990, when the Advanced Cruise Missile (ACM) comes on line.) Excluded are 61 FB-111 aircraft under the Strategic Air Command, about 250 B-52s in storage at Davis Montham airbase and on display, and 69 B-52Gs recently converted and reassigned to conventional missions. The United States generally maintains its strategic force at a high state of readiness, with 30 percent of its bomber force on 24-hour alert, over 50 percent of its missile-carrying submarines on station or in transit, and more than 90 percent of its ICBMs ready for immediate launch.

US ICBMs	Launchers		Warheads
MINUTEMAN II	450	x 1	450
MINUTEMAN III	500	x 3	1,500
MX	50	x 10	500
	Sub-Total: 1,000		Sub-Total: 2,450
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US SLBMs			
C-3	224	x 10	2,240
C-4	384	x 8	3,072
	Sub-Total: 608		Sub-Total: 5,312
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US BOMBERS			
B-52G (8/ALCM + 8/SRAM)	98	x 16	1,568
B-52H (12/ALCM + 8/SRAM)	78	x 20	1,560
B-52H (8/SRAM)	18	x 8	144
B-1B(16/SRAM)	95	x 16	1,520
B-1B(8/ALCM)	2	x 8	16
	Sub-Total: 291		Sub-Total: 4,808
	Overall Total: 1,899*		Overall Total: 12,570**

* SLBM totals exclude two 16-tube POLARIS submarines whose missile tubes have not been dismantled but are no longer operational and one 24-tube TRIDENT submarine which has begun sea trials but has not yet been outfitted with TRIDENT D-5 missiles.

** Weapons totals are based on the ICBM and SLBM counting rules agreed to at the US-Soviet summit in Washington, D.C., December 7-10, 1987. Warhead numbers do not include US long-range SLCMs or weapons aboard US FB-111 aircraft. Bomber loadings are based on aircraft carriage capability and weapons availability. Actual operational loadings are likely to be lower.

provide the basis for negotiations. Furthermore, they agreed on a ceiling for ICBM and ALCM warheads to be set at 6,000. They also decided not to deploy more than 1,600 ICBMs, SLBMs and long-range bombers. They also agreed that a bomber carrying conventional bombs and/or a missile with limited range should be counted as one warhead. The U.S. also accepted the Soviet demand for further negotiations to limit the number of SLCMs with nuclear warheads. The exact figure limiting SLCMs beyond 6,000 warheads and 1,600 launchers was to be negotiated in Geneva.

Much of the discussion about limiting strategic weapons has since centred around the American desire to establish sub-ceilings for ICBM warheads in order to reduce the potential for surprise attack against U.S. landbased ICBMs, airfields and submarine ports. Since the Soviet Union has more than 60% of its warheads on land-based ICBMs, it has been an American objective to ensure that the Soviet Union will place more of its warheads on submarines and aircraft.

At the Washington summit in December 1988, the agreements reached at Reykjavik were formally reaffirmed, and an ICBM sub-ceiling was set at 4,900 warheads for each side. The remaining issues were concerned with the number of ALCMs to be equated with bombers with ALCM, and the types and numbers of SLCMs to be limited.

At the meeting in Washington in June 1990 between Presidents Bush and Gorbachev the preceding limitations were confirmed and agreement on the difficult issues of ALCM and SLCM limits was announced. These include liberal provisions for heavy bombers carrying long-range (over 600 km) nuclear ALCM. Each heavy bomber counts as one delivery vehicle under the overall limit on 1,600 launchers. Against the overall limit on 6,000 warheads the first 150 U.S. heavy bombers are counted as carrying 10 warheads each, and all bombers over this are counted as carrying 20 warheads. For the USSR the first 210 heavy bombers are counted as carrying 8 warheads and all bombers over this as carrying 12 warheads. This permits considerable increases in both sides heavy bomber/ALCM forces relative to the ICBM and SLBM legs of the triad. Outside the framework of the START Treaty it was also agreed to limit long-range (over 600 km) nuclear SLCM's to below 880.

The superpower negotiations have demonstrated that the United

States has a clear tendency to underline the importance of aircraft and cruise missiles in the overall strategic balance. This is partly due to the American belief that the capability to target so-called relocatable targets (mobile ICBMs, concentrations of air forces and army units etc.) must be improved. In the debate about the development of the B-2 bomber, stress has also been placed on the need to reduce dependence on forward bases.

In this connection it should be pointed out that the United States has completed the modernisation of B-52s to carry ALCMs, and that they now possess 98 B-52Hs, which can carry 20 ALCMs each (total of 1,960 warheads), and 96 B-52Gs, which can carry 12 ALCMs each (total of 1,152 warheads). Production of the B-1 has been completed, and there are now about 100 operational B-1 bombers. The future of the B-2 'Stealth' bomber remains uncertain. This is due to Congressional resistance owing to the extremely high development costs of this high-technology aircraft. Nonetheless, it is reasonable to assume that a substantial number of B-2 bombers will be produced, although far below the earlier proposed figure by the Defence Department of 132.

It is assumed that the B-2 will be used as a penetration bomber. This means that once the B-52H is phased out, sometime early in the next century, the B-1 will be converted into a missile-carrying platform.

The air threat against the Soviet Union in the High North

The proportion of the total U.S. fleet of long-range bombers and missile carriers that, in the event of war, will use the North Atlantic route for an attack against the Soviet Union, is not known. Independent studies,¹ however, do point out that an attack with cruise missiles would probably be coordinated with an attack of penetration bombers (B-1s and B-2s).

The continued deployment of cruise-missiles by both super-powers is clearly a source of instability in the North, even though the impact of Soviet and U.S. deployments have dissimilar effects. Possible approach routes towards Soviet territory by U.S. SLCMs and ACLMs may involve overflights of Norwegian, Swedish and

Finnish territory. This creates particular problems for the neutral Nordic states, whose credibility as neutrals rests upon their manifest willingness to deny the use of their territory and air space by belligerent powers. This may provide the Soviet Union with a pretext for asserting that if Finland does not prevent cruise missiles targeted against the Soviet Union from overflying Finnish territory, the Soviet Union has a right to 'assist' Finland in the defence against cruise missiles, in accordance with the bilateral treaty of 1948. In other words, the Soviet Union may use this as a justification for engaging in forward defence of Soviet airspace on Swedish and Finnish territory. It also appears to be the bomber and the cruise missile threat that motivate Soviet efforts to erect a maritime forward air defence system in western parts of the Norwegian Sea. If the Soviet navy does succeed in establishing an effective forward air defence system in Western parts of the Norwegian Sea, this will clearly have a very negative impact on Norway's links to its overseas allies.

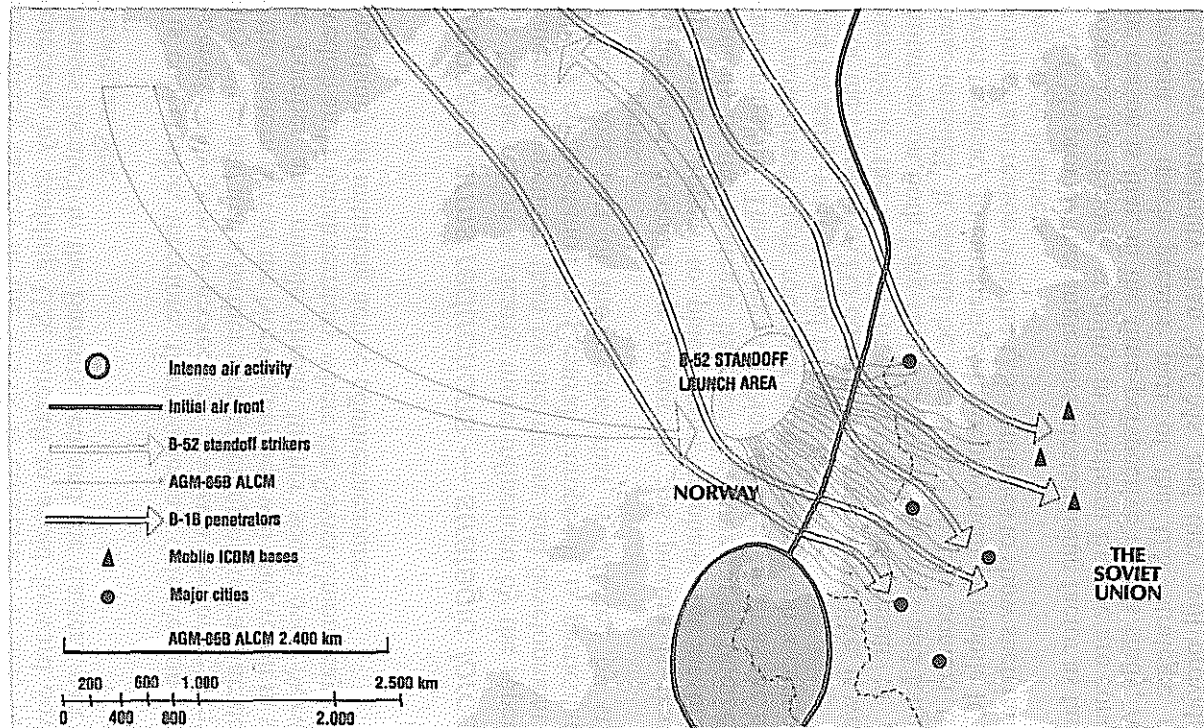
The Soviet cruise missiles that have received most attention in the West are the SS-N-21 and SS-NX-24. The first of these can be launched by ordinary torpedo tubes found on submarines such as the Yankee «Notch» (ex-SSBN), Sierra and Akula. It can also be launched from air platforms and major surface combatants.

SS-NX-24 is a long-range supersonic cruise missile that can only be launched from specially constructed or converted submarines (e.g. ex-Yankee-class SSBNs). Official Norwegian reports show that former Yankee-class SSBNs, including some that are refitted to carry cruise-missiles, now operate in patrol areas from where they can only reach targets in Western Europe and the Nordic region.

The introduction of long-range cruise missiles on board submarines in the Northern Fleet will inevitably mean that the home ports, transit-routes and patrol-areas of these submarines will be subject to increased surveillance, and will no doubt also lead to a continued effort in the ASW area on the Western side. This tendency may cancel out any reduction of submarine surveillance and preparatory ASW measures that may follow in the wake of a successful START treaty.

An American attack with long-range bombers would probably approach the Norwegian coast between Lofoten and the Trondheims Fjord, since this area is well located as far as distance to the

Launch area and transit routes



Example of optimal AGM-86B strategic nuclear ALCM standoff launch area in the Norwegian Sea, ALCM transit routes, and integrated B-1B penetration routes into the USSR. (Source: Tomas Ries, Strategic Implications of Unmanned Aircraft for the Nordic Region, Norwegian Institute for Defence Studies, April 1990).

most likely targets in the USSR is concerned. It also provides protection by enabling U.S. aircraft to avoid forward Soviet air defenses located in the Barents Sea and the Eastern part of the Norwegian Sea.

It is conceivable, therefore, that Soviet air defences on the Kola peninsula only provide protection against a secondary American entry route, and that a further strengthening of forward air defences in the eastern part of the Norwegian Sea will only result in shifting the bomber and missile threat further south over Norwegian, Swedish and Finnish territory where the Soviet Union may have less opportunity of initiating active countermeasures.

Proposed arms reductions — strategic forces

The Nordic region is clearly more influenced by the superpower strategic competition than by the nature and development of the military confrontation in Central Europe. It is particularly the northernmost part of the region that is affected by strategic developments.

The most destabilising factor in this picture is that both superpowers appear to place more emphasis on air breathing elements in the strategic balance (i.e. long-range bombers and cruise missiles). This brings the Northern region in as the shortest and most direct flight route for such systems, with a concomitant need for early-warning and forward defence.

For the Nordic NATO countries and neutrals alike, it would be desirable if the START-negotiations would result in greater limitations on both long-range strategic bombers and long-range cruise-missiles. It should be mentioned in this context that the Soviet tendency to emphasise the deployment of mobile ICBMs is an important reason why the U.S. continues to show such interest in long-range bombers.

ALCMs provide the single most destabilising factor as far as the prospects for regional stability in Northern Europe are concerned. The reason is that, in the time-perspective of this study, ALCMs represent a much greater part of the U.S. strategic nuclear retaliatory capability than SLCMs, and they will provide what

appears to be a justification for the Soviet Union to develop forward air defence systems.

At the same time, the United States and Canada will clearly also be vulnerable to Soviet cruise missiles delivered from sub-surface platforms (SLCMs), effective defence against which will be extremely difficult to conduct. This problem can presumably only be solved by a superpower agreement banning all long-range nuclear-tipped cruise missiles as part of a wider START agreement. In order to make the banning of all seabased cruise missiles more palatable to both parties, one could, as a preliminary step or as a compromise solution, allow for the continued deployment of conventionally-tipped seabased cruise-missiles with a maximum range of 600 km.

In order to verify such a ban, and also in order to minimise risks of escalation to the nuclear level, agreement should be reached banning nuclear weapons on board all naval vessels, with the exception of SLBMs. Until an agreement on general and complete disarmament has been reached, SSBNs will have to form an integral part of «minimum deterrent» forces on each side. The idea of banning all nuclear weapons on naval vessels except for SSBNs has been put forward before, notably by the former chief U.S. negotiator at SALT, Paul Nitze. A ban will probably be beneficial to both parties.

NATO capabilities in Northern Europe

General observations

Any assessment of future NATO capabilities in the North as the basis for considering Soviet conventional force reductions is inherently difficult, even if one is only dealing with a medium-perspective. The primary reason for this is simply the uncertainty surrounding the final outcome of current negotiations in Vienna (CFE) and Geneva (START), despite the fact that the actual shape of the agreements is beginning to emerge. Moreover, one is already talking about a possible CFE- II process, the aim of which would be further reductions beyond the CFE treaty. Given the pace and logic of international events, one may even expect further superpower initiatives to go beyond existing positions in Vienna. A START treaty will also affect the central strategic balance between the superpowers. This will inevitably have an impact on the Northern Fleet, given its current share of the Soviet SSBN force, as this may result in proportional cuts also in the conventional components of the Northern Fleet.

It was suggested in the introduction of this study that the CFE negotiations will lead to a general improvement of Norway's defence situation in South Norway. This is one of the reasons why this study focuses on the situation in the far North, particularly on Soviet forces in the Leningrad Military District and on the Kola peninsula

An isolated Soviet attack against North Norway has so far been deemed highly unlikely, the reason being that the risks and costs involved have been assumed to outweigh any benefits, political or strategic, that might accrue from an attack. Several factors may change this situation over the next couple of years. Apart from the fact that Kola is the home base for a large proportion of Soviet SSBNs, the INF treaty, which effectively upgraded the relative importance of sea- and airbased cruise missiles, has magnified the

strategic significance of the Northern region. This is related both to the fact that Soviet submarines carrying SLCMs are now patrolling these waters, and that U.S. B-52s (later B-1 and B-2) may launch their ACLMs from airspace over the Norwegian Sea. Moreover, in the wake of a CFE treaty and the erosion of the Warsaw pact, Soviet capability of launching a surprise attack in Central Europe will diminish; in contrast, this option will still exist in the North. If these developments are seen in conjunction with a gradual decoupling of the Nordic region from Central Europe as the post-war bloc structure disintegrates, it is quite clear that the vulnerability of Scandinavia will increase. In other words, the strategic importance of the region is being influenced by factors that do not affect other European countries. This underlines the importance of the trans-Atlantic link and relations with the United States for Norwegian security, but it also suggests that the United States will continue to be interested in maintaining its present maritime strategy with emphasis on forward defence.

In addition to the general easing of tension in Europe, reduction of the perceived military threat and increasing pressures on all forms of public services in most Western countries raise questions over the future size of defence expenditures. A changing perception of threat combined with ever increasing competition over domestic resources may also lead some governments to settle for force levels below the ceilings set by treaties.

This study is based on the assumption that Western forces will be reduced in the years to come, and that this may lead to reductions of external support. However, these reductions will probably not be of a dramatic nature. The reasons for this are several:

- The character of the Northern region as a maritime theatre and the fact that naval forces have not yet been included in negotiations leave questions concerning the timing and the scope of naval reductions unclear.
- The negotiations now under way in Vienna will above all lead to reductions in the size and equipment of the heavy, motorized army units which we find today on the Central Front. This must be seen as a recognition of the fact that a general European war is increasingly unlikely, even if confined to a conventional level (where the dangers of escalation and the enormous costs of a conflict are recognized). Instead, one may expect a development where great powers will emphasise and

develop their capacity for power projection and the conduct of conflict at lower levels of intensity. If this is indeed the case, the role of sea and air forces, light and naval infantry, air assault units etc. (i.e. the kind of units our allies plan to use in Norway in the event of war) will be enhanced. Although such units are intended for a wider range of contingencies, it could still be argued that the availability of suitable allied reinforcements will not change dramatically.

- In the wake of a CFE treaty, joint NATO funding may be used to transfer new equipment barred in Central Europe to replace aging equipment in NATO's flank nations.
- Finally, any guesses about future fluctuations in force levels on the Western side — guesses based on an analysis of events within the WTO — will necessarily be of a speculative nature, and cannot therefore form the basis for further arguments and conclusions.

In short, it would seem most reasonable, for the foreseeable future, to assume that Western military capabilities that can be brought to bear on the Northern region will not be substantially reduced from the present level.

As far as developments in military technology are concerned, the new projects which may have the most significant impact on the present balance of forces within the time period with which this study is concerned may be air surveillance and target acquisition systems (JSTARS), and conventional tactical ballistic missiles for attack on follow-on forces (FOFA). Although an additional series of new weapons systems exist on the drawing board or even in prototype form (e.g. high-energy laser weapons, particle beam weapons) the technology involved is either unknown to both sides, or the weapons themselves will not become operational for some considerable amount of time. Moreover, there is nothing that suggests that such weapon-systems will confer greater advantage to one party in a particular area if these systems are possessed by both parties. Although some of these weapons are designed to limit damage (jamming etc.), weapons intended to destroy material targets require so much energy as to question their use on mobile platforms, except maybe on larger warships.

NATO air forces

A. Norwegian (Royal Norwegian Air Force)

- 4 fighter squadrons (62 F-16) with anti-shipping capability (Penguin Mk III)
- 1 squadron of fighter ground attack aircraft (20 F-5A/B)
- 1 maritime reconnaissance squadron (6 P-3B/C)
- 1 helicopter squadron assigned to the Coast Guard (Lynx Mk 86)
- 1 helicopter squadron for SAR (Sea King Mk 43)
- 2 helicopter squadrons for tactical support for the Army (HU-1B now being replaced by Bell-412 SP)
- 2 transport squadrons, 1 with C-130, 1 with DHC-6 aircraft and UH-1B helicopters.

B. Norwegian (mobilisable)

- 7 mobilisation squadrons with requisitioned (civilian) helicopters.

C. Allied air forces

- 14-15 fighter squadrons of different types, which provide for 200-300 aircraft, depending on the number of aircraft assigned to each squadron. This includes the air element of Norway Airlanded Marine Expeditionary Brigade (NAL MEB) consisting of approximately 75 aircraft (F4/F-18 for air defence, AV-8 Harrier/A-4 Skyhawk for tactical ground support).

D. Seabased aviation

- Aircraft operating from carriers along the Norwegian coast or in the Norwegian Sea. Dependent upon the situation and upon competing commitments, maximum 4 carrier battle groups could be deployed to the area, carrying approximately 340 combat aircraft.

Allied force reductions resulting from cuts in defence expenditures and further reductions in the wake of a successful CFE treaty may adversely affect the prospects for securing air reinforcements to Norway in the event of crisis or war. Squadrons now forming part of the reinforcement plans may be given more options or different tasks. Furthermore, Central Europe may be accorded greater

priority when the overall number of squadrons is reduced. The end result may be fewer squadrons assigned to the defence of Norway. It must also be remembered that the actual number of aircraft sent to Norway will vary according to the circumstances in which a decision to send reinforcements has been made.

Tactical aircraft that constitute a potential threat against the Soviet Union in the North are allied aircraft directly included in the plans for reinforcing North Norway. The forces in question involve aircraft with a very limited capacity for a deep strike in an area with highly developed air defences. We therefore see no reason for suggesting a reduction of tactical aircraft on the Western side.

NATO ground forces

A. Norwegian ground forces

Standing forces:

- 1 reduced brigade in Troms (3 out of 4 battalions, support and supply units)
- 1 reduced and 1 reinforced infantry battalion in Finnmark

Norwegian mobilisable forces/reinforcements (available from M+2/3):

- 3 brigades in Troms (1 mobilised locally, 2 from South Norway with prepositioned equipment in North Norway)
- 1 brigade, transferred from North Trøndelag, not prepositioned equipment
- 3 infantry battalions in Finnmark (2 mobilised locally, 1 from South Norway with prepositioned equipment in Finnmark)
- A number of local field and Home Guard units

B. Allied forces

Deterrent forces:

- 1 multinational brigade (AMF(L))

Reinforcements:

- 1 seaborne commando brigade (UK/NL Landing Force)
- 1 air-landed marine expeditionary brigade with air support (NALMEB)
- 1 infantry battalion and 2 field artillery battalions (NATO Composite Force — NCF).

Compared to Soviet army units, the Norwegian forces listed above clearly possess less overall firepower and they lack armour protection. The relatively high number of Norwegian tracked over-snow vehicles makes the situation less critical as far as mobility is concerned in the extremely difficult terrain of Troms. Yet, an overall assessment of available forces, taking into account in particular the large number of Soviet combat helicopters, shows that even in the field of mobility they are clearly inferior to those of the Soviet Union. Another element of uncertainty is the fact that while standing forces maintain a high level of training, mobilisation units do not. This means that it is not so much the time needed for transferring units from South Norway to the North that will limit their combat readiness, but rather the time required to bring them up to a sufficient standard of combat effectiveness.

As for allied reinforcements, the UK/NL Landing Force is a light unit with limited heavy fire support and no armoured/mechanized mobility. However, its winter and mountain training and helicopter support ensure great mobility in the Norwegian terrain. Moreover, the force is composed of professional soldiers, having exercised repeatedly in Norway, this force must be seen as highly effective under the special geographic and climatic conditions in the North.

NALMEB is a potent force that, in addition to its air-mobile capacity, includes heavy fire support in the form of artillery and close-support aircraft. Thus, compared to regular army units this force only lacks a sizeable number of armoured vehicles.

NCF is a pure support unit consisting of independent infantry and artillery battalions that would be deployed alongside Norwegian units. AMF(L) is, as indicated, primarily a deterrent force which can, however, perform a reinforcement role if deterrence were to fail. Its combat capability is limited by the same restrictions that apply to the UK/NL LF.

On the basis of the existing balance of opposing forces in the region, including allied units, from a professional military point of view, it is not possible, therefore, to argue that there exists a landbased military threat to the Soviet Union in the North. This is true with regard to both potential routes of attack: from Kirkenes/Sør-Varanger towards Pechenga-Murmansk, and from Troms over Finnish territory towards Kandalaksha.

Statements made by Soviet officials in connection with the

ongoing disarmament talks have contained assertions to the effect that there exists an allied amphibious threat against the Soviet Union in the North. There has, however, been no elaboration upon the nature of the alleged threat, and the objectives against which an allied operation would be directed. In this connection, it must be emphasised that the U.S. and U.K./Netherlands Marines, which constitute the main reinforcements to North Norway, have no capability to conduct assault landings on enemy territory. As reinforcements they are dependent upon administrative transport by sea or air to North Norway, and they will subsequently be deployed alongside Norwegian and other allied forces, defending Norwegian territory against a Soviet attack.

Even if NATO's Atlantic Fleet may have an amphibious capability (see p. 30), this potential will vary greatly with the circumstances, and much time would be needed for necessary planning, reconnaissance, and rehearsals before any assault landing could be made on enemy territory. Furthermore, NATO would need to establish land, air, and sea superiority in the landing area and its approaches. In view of the obvious high risks involved in a deliberate assault landing on the Kola or White Sea coasts, under the prevailing conditions, this study is based on the assessment that there is no realistic amphibious threat against Soviet territory in the North, and this scenario will therefore not be addressed further.

NATO naval forces

A. Norwegian forces

1. The Navy:

- 5 frigates
- 2 corvettes
- 2 minelayers
- 8 minesweepers
- 13 submarines
- 38 patrol and coastal combatants (missile craft)
- 1 depot ship
- 7 amphibious crafts
- 2 mine clearing crafts

New submarines and mine countermeasure vessels are on order, and when these have been delivered the Navy will possess 6 new (ULA-class) and 6 refitted (Kobben-class) submarines and 9 vessels intended for mine countermeasures. The precise number of equipped and operational ships at any one time varies in accordance with the personnel situation in the armed forces, refitting programmes under way, and budgetary constraints.

2. *The Coast Guard:*

- 3 large vessels with helicopters (Nordkapp-class)
- 3 older vessels
- 7 chartered vessels (large fishing vessels)

3. *Requisitioned vessels:*

- Ferries for minelaying
- Trawlers for minesweeping
- Coastal and transport vessels; special vessels organised in groups for support and supply functions.
- Fishing vessels and other ships belonging to the Naval Home Guard
- Passenger ships to serve as hospital ships

4. *Maritime aircraft:*

The Air Force is renewing its long-range maritime aircraft. The 333 squadron in the future will consist of 6 Orion aircraft. Four P-3Cs will perform the primary surveillance role, while two older type P-3Bs will be employed by the Coast Guard.

B. Allied forces

The strategic mobility and flexibility of naval forces mean that one cannot be certain about the number and type of units that would be employed in the vicinity of Norway in the event of a conflict. We have chosen to list those units that can or are likely to be employed in the Norwegian Sea and along the Norwegian coast.

I. The most important of these is clearly NATO's main battle fleet in the Atlantic — Striking Fleet Atlantic (STRIKEFLEET) — which consists of the following units:

- The fleet's Antisubmarine Warfare Striking Force — STRIKEFOR — is built up around one or two ASW carriers (CVS) of the Invincible-class. In addition to the carriers, the force consists of 15-29 ASW vessels from

different member countries. Most of these ships belong to the Royal Navy, but West German, Dutch and Belgian units also participate in ASW operations. The Commander-in-Chief of the force is British, and his primary responsibility is to protect the rest of STRIKEFLEET against submarines.

- The fleet's Carrier Striking Force — CARSTRIKEFOR — consists of 1-4 large American carriers with support vessels. The Commander-in-Chief is American. If, for example, three carriers are employed, the number of accompanying surface vessels will be approximately 30.

A carrier Air Wing normally consists of:

- 2 squadrons of air defence fighters each with 12 aircraft (F-14 or FA-18)
- 2 fighter squadrons designated for air-to-ground support operations each with 12 aircraft (A-7 or FA-18)
- 1 squadron of fighter bombers with 10 aircraft (A-6)
- 1 squadron ASW-aircraft with 10 aircraft (S-3A)
- 1 squadron ASW-helicopters (6 SH-3H)
- 1 squadron with 4 EK-aircraft (EA-6B)
- 1 squadron with 4 air warning aircraft (E-2C)
- 1 squadron with 3 reconnaissance aircraft (RF-8)
- 1 squadron with 4 tankers (KA-6D)

This standard Air Wing varies somewhat depending on the size of the carrier and the mission assigned to it. In a new plan for standard aircraft deployment on board all new carriers the following aircraft are listed:

- 20 F-14D Tomcat
- 20 FA-18 Hornet
- 20 A-6 Intruder
- 5 EA-6B Prowler
- 5 E-2C Hawkeye
- 10 S-3 Viking
- 6 SH-3 Sea King

The tanker KA-6D will thus not be part of the new set-up.

- The fleet's Amphibious Striking Force — PHIBSTRIKFOR — consists of ca. 45 ships, transporting marines from the United States, the United Kingdom and the Netherlands (The Marine Striking Force — MARSTRIKEFOR), in addition to individual escorts from these same countries. The force has its own supplies, and possesses sufficient air power for local air defence and tactical air-to-ground support operations. The elements in MARSTRIKEFOR are the whole or parts of one Marine

Expeditionary Force (MEF) with an Air Combat Element, and/or the UK/NL Amphibious Force.

The STRIKEFLEET can be operational in the North Atlantic within 0-10 days, depending on existing deployments and whether or not amphibious forces have embarked. The availability of STRIKEFLEET units also depends on the actual situation in which employment is being considered; i.e. carriers may already have been deployed in the Mediterranean or the Indian Ocean.

2. NATO's Standing Naval Force Atlantic — STANAVFORLANT — consists of 5-9 destroyers/frigates from different member countries. This force frequently operates in the North Atlantic and should therefore be readily available for deployment in Northern Waters. Similarly British, West German and Dutch escort groups should also be readily available for deployment alongside STANAVFORLANT ships.

3. It is also conceivable that French and Spanish units may be employed in major operations in the Norwegian Sea, particularly in a crisis. The navies of France and Spain consist of the following forces respectively:

France:

- 2 carriers (attached the Mediterranean Fleet)
- 1 helicopter carrier
- 2 cruisers
- 15 destroyers
- 24 frigates
- 18 attack submarines (4 of which are nuclear-powered)

Spain:

- 2 carriers (only one of these is normally operational in peacetime)
- 7 destroyers
- 14 frigates
- 8 attack submarines

Though NATO is a maritime alliance, one likely result of the CFE negotiations and the political developments now taking place in Europe and between the superpowers is increased pressure for reductions in naval forces. It is assumed that unilateral reductions on the American side may result in no more than 12 carrier groups being left in service. On the British side, however, a possible strengthening of the Royal Navy has been discussed. This is related to the fact that a CFE treaty may enable Britain to alter the size of the BAOR, which for political reasons has remained fixed at the

level set by the revised Brussels treaty of 1954 (ca. 56,000 men). If this number can be reduced, resources may be reallocated with a greater share going to the Royal Navy. Political developments in Europe may also lead Britain to assume, historically speaking, a more traditional role in relation to its European partners on the Continent. This could mean that, at least in relative terms, the navy may be given greater priority than it was given in the 1980s.

As far as the strategic context is concerned, it is, above all, American submarines carrying ballistic missiles that constitute a threat to Soviet territory. The operational concept and deployment pattern of the U.S. Navy SLBM force ensures that these submarines will not have any direct impact on Soviet defences in the North, except to the degree that they may induce the Soviet Union to accord greater priority to strategic ASW and anti-SSBN measures. This, in turn, could lead to an expansion in the Soviet fleet of nuclear-powered attack submarines (SSN) in the Northern Fleet. Of greater importance for the future development of the SSN component of the Northern Fleet, however, is probably the need to protect the Soviet SSBN fleet. After the conclusion of a strategic arms agreement it may be possible that the Soviet SSBN force will consist of 8 Delta IV and 8 Typhoon-class SSBNs. The reduction in the number of SSBNs will most probably reduce the overall need for SSN protection. Moreover, there are several ways in which the Soviet Union can reduce the vulnerability of its SSBN force, i.e. operating under the ice and/or in more inaccessible waters in the North. It would be reasonable therefore to press the case for a reduction of Soviet attack submarines in the context of an agreement to reduce Soviet SSBNs under a START treaty.

As part of the air threat, one cannot ignore the potential role of U.S. carrier-based aircraft which may operate within reach of Soviet territory in the North (ca. 1,500 km). These aircraft may be equipped with electronic countermeasures designed to facilitate penetration of Soviet air defences, though it must be stressed that there are only ca. 20 aircraft on each carrier which can be employed in such a role. Moreover, carrier operations close to the Soviet base facilities at Kola will entail very high risks.

There is no doubt that the Soviet Union sees U.S. carrier groups as posing a very real threat to its territory in the North. For example, the development of Oscar-class submarines and long-range

maritime bombers (TU-26 Backfire, part of the Northern Fleet Aviation) have been justified with reference to the U.S. carrier-based threat. The Soviet Union has also explained the development of its own Tbilisi-class carrier (carrying SU-27 Flanker air defence fighters) on the grounds that these ships will provide protection for Soviet surface combatants and submarines engaged against U.S. carriers.

Norwegian defence planning has emphasised the desirability of U.S. carriers operating near the coast in the West Fjord/Ofoten area. The primary reason put forward for this is that the carriers will then be able to provide air cover over Norwegian territory, thus supporting army units defending the interior of Troms, and, at the same time, protect the introduction of allied reinforcements. Operations close to the shore will also assist allied carrier operations by providing greater protection against stand-off missiles and submarines.

The distance from the West Fjord to the main base of the Northern Fleet at Severomorsk is approximately 750 km. This is well within the reach of fighter bombers normally stationed on board U.S. carriers (F-18 and A-6). Thus a conflict of interest may arise over what the Soviet Union deems to be its legitimate security needs on the one hand, and Norwegian and allied defensive needs on the other. Such a conflict will clearly be detrimental to the goals of maintaining regional stability and 'low tension'. This suggests that a mutually acceptable solution aimed at meeting the perceived security requirements of both parties should be sought. One such solution may be for Norway to provide adequate air forces for the region without linking this directly to the presence of U.S. carriers in the area. One could, for example, modify existing plans for reinforcements by increasing the number of allied air defence squadrons earmarked for North Norway. Based on operational requirements, there should be a minimum number of squadrons equipped and trained for all-weather air defence. It is also crucial that the time period within which the deployment of allied squadrons can be made is sufficiently short. It will be difficult for the Soviet Union to disapprove of attempts to upgrade air defences in North Norway along the lines suggested, for the obvious reason that the process would involve a reduction of the threat to Soviet territory. Another alternative is for Norway to increase its number

of F-16 squadrons stationed in North Norway. These units would have to be equipped and trained for full all-weather air defence, involving operational coordination with NATO's AWACS operating from Ørlandet. If this were to be done, allied reinforcement squadrons could be re-allocated to bases in South Norway in order to further emphasise discretion and defensive intent. Such measures would have to be reciprocated by Soviet restraint in the deployment of those elements of the Northern Fleet which constitute a threat to North Norway (for example the new Soviet CTOL carrier of the Tbilisi class).

In purely numerical terms, long-range nuclear-tipped American SLCMs constitute far less of a threat to the Soviet Union than do the ALCMs. It is clear, however, that SLCMs may be launched along different flight paths and this might result in a continued Soviet emphasis on forward air defence in the Barents Sea and the northern parts of the Norwegian Sea.

Soviet restructuring in the North — air forces

Any attempt to establish a figure reflecting «reasonable sufficiency» for Soviet air forces in the North must proceed from three basic facts: air forces are particularly flexible; several of the aircraft involved have long-range operational radius; and it is relatively easy to redeploy and regroup air units within a short time span. The Soviet Union is in possession of a considerable air-lift capability, which can be further augmented by utilising the resources of the state airline Aeroflot. Moreover, there exists on the Kola peninsula a highly developed network of air bases whose capacity is not fully utilised (only 50% is used in peacetime).

Soviet air forces in the North

Within our area of application the relevant forces from the point of view of this study include:

	fighters	armed helicopters
1. Tactical air forces in Leningrad Military District	150	80
2. Air defence aircraft in Archangel/ Leningrad Air Defence Districts.....	300	
3. Northern Fleet Aviation	250	80
Sum:	700	160

Tactical aircraft in the *Leningrad Military District* include ca. 150 fighter bombers and 80 attack and armed helicopters. Fighter bombers are not permanently stationed on the Kola peninsula, but

they are deployed regularly to Kola from the area around Leningrad, usually at squadron level for participation in army manoeuvres at divisional level. Also stationed on Kola are 40 attack and armed helicopters as well as 40 transport helicopters. In addition to this, two squadrons of tactical reconnaissance aircraft with a total of 25 Mig-25 Foxbat B/D and SU-17 Fitter H/K are stationed on Kola. Lately, the tactical air forces in the Leningrad Military District have been strengthened by two regiments of long-range fighter bombers, SU-24 Fencer. Formerly, these aircraft were only attached to the Air Army in Legnica in Poland, and their presence in the Leningrad Military District has considerably improved the capability for offensive tactical operations from the Leningrad Military District.

Archangel/Leningrad Air Defence Districts. What used to be the Archangel Air Defence District has been divided into two; the southern part of the district now comprises a separate Leningrad Air Defence District. It is assumed that the overall number of aircraft has not changed, ca. 300 of which approximately 100 are stationed on the Kola peninsula. Since 1982 three air defence regiments have been converted to MIG-31 Foxhound A, while two air defence regiments have been supplied with Su-27 Flanker B. Both types of aircraft are highly sophisticated air defence fighters with «look-down, shoot down» capability and enhanced operational radius and endurance. New Il-76 Mainstay AWACS have been tested around the Kola since 1984 and are now fully operational.

Fighters from the Archangel Air Defence District also escort long-range bombers and missile platforms in training missions against the North American continent.

The Northern Fleet Aviation consists of approximately 430 aircraft and helicopters, including one regiment with TU-26 Backfire bombers and two regiments of Tu-16 Badger maritime attack aircraft. In addition to this, naval aviation in the Northern Fleet includes Yak-38 fighter bombers (on land and on board Kiev-class carriers). These can operate against targets on land while also performing limited air-to-air tasks (e.g. against NATO's maritime surveillance aircraft).

80 to 90% of all missions west of 30 degrees East longitude in the

vicinity of Norway are conducted by naval aviation from the Northern Fleet. Tu-26 Backfires from the Baltic and the Black Sea Fleets, and units from the Smolensk Air Army are occasionally transferred to air bases on the Kola peninsula. These airfields are also frequently used by tankers from the Moscow Air Army.

Arms control measures — Soviet air forces

At the CFE negotiations NATO and the WTO have agreed to limit the number of land-based combat aircraft on each side within the ATTU to 4,700. This leaves out training aircraft on the understanding that these will remain unarmed. NATO is also expecting the WTO to accept a separate sub-ceiling for defensive interceptors, limiting the number to 500 on each side. If one party holds interceptors in excess of the sub-ceiling, corresponding reductions must be made in the total number of combat aircraft fixed at 4,700.

It is also assumed that combat helicopters armed with anti-tank missiles will be included in the category for combat aircraft. Light helicopters will not be included in this category.

If only one common ceiling is established for combat aircraft and anti-tank helicopters within the ATTU, this will enhance the need for a separate sub-ceiling on the number of combat aircraft and helicopters within the Leningrad Military District and in the corresponding area on the NATO side. If such a separate sub-ceiling is not arrived at, the Soviet Union, as the aforementioned analysis makes clear, will be able to redeploy air units in such a way as to secure a significant numerical and operational superiority in the North. With the exception of carrier aircraft, NATO's air assets are tied to regional tasks, and because of the geographical asymmetries, there is no corresponding option to redirect and concentrate air forces to the North.

We propose that the sub-ceiling suggested above be set at 620 combat aircraft and 135 combat helicopters in the Leningrad Military District, the Archangel and Leningrad Air Defence District, the Northern Fleet, as well as within NATO's Northern Command. This would entail a reduction on the Soviet side of 15% of existing forces. The ceiling will apply to all combat aircraft and combat helicopters permanently stationed in the relevant areas, or

for aircraft deployed to the area during exercises (including carrier-based aircraft).

In addition, we propose a further CSBM limitation which should take the form of a ban on the permanent stationing of fighter bombers on the Kola peninsula and on Norwegian airfields east of 24 degrees East. The transfer of fighter bombers and combat helicopters to Kola and North Norway beyond 65 degrees North must be notified in accordance with the rules agreed under CSBM negotiations.

We propose a ban on training missions with long-range bombers and missile carrying platforms against the Soviet Union and North American territory conducted over the polar basin.

Finally, we propose the creation of an Air Defence Identification Zone (ADIZ) — similar to the ones already established for Iceland and the North American continent — for Norwegian and Soviet territory in the North. Aircraft will identify themselves when operating within the proposed zone. Foreign aircraft are only allowed within the ADIZ of the other party if a flight-plan has been submitted and observed by involved parties in advance.

Soviet restructuring in the North — ground forces

The absence of a land-based military threat to the north western parts of the Soviet Union means that relatively strict limitations must be placed on Soviet army units in the region. It is, in other words, not enough to accept the CFE agreement as the only set of restrictions. CFE will not, for example, contain local sub-ceilings for forces in this area. Furthermore, a CFE treaty will not place any restrictions on the operational status of army units, nor will it address issues relating to the notification of exercises and other forms of confidence-building measures.

We propose a reduction of Soviet ground forces along two lines:

1. *Structural limitations* by imposing a local ceiling on the type, number, category of combat readiness, equipment, and location pattern of various units.
2. *Operational limitations* involving agreements that regulate exercise patterns, areas and frequency, as well as guaranteeing warning and inspection rights in connection with mobilisation exercises and large ground force manoeuvres.

It must be accepted, however, that the Soviet Union possesses a legitimate interest in maintaining army units in the North. The principle of balanced forces implies that a large concentration of sea and air forces in an area necessitates a corresponding level of ground forces to ensure that enemy forces do not overrun bases, thus securing a decisive advantage. The argument that the rationale for such an attack is difficult to establish may be refuted on the simple grounds that in the total absence of Soviet ground forces in the area only a very small attacking force will suffice. On the other hand, the Soviet Union is not in a position to reject out of hand the limitations suggested above since it will require both a concentra-

tion of forces and time for Western ground forces to prepare an attack over land against the Kola peninsula.

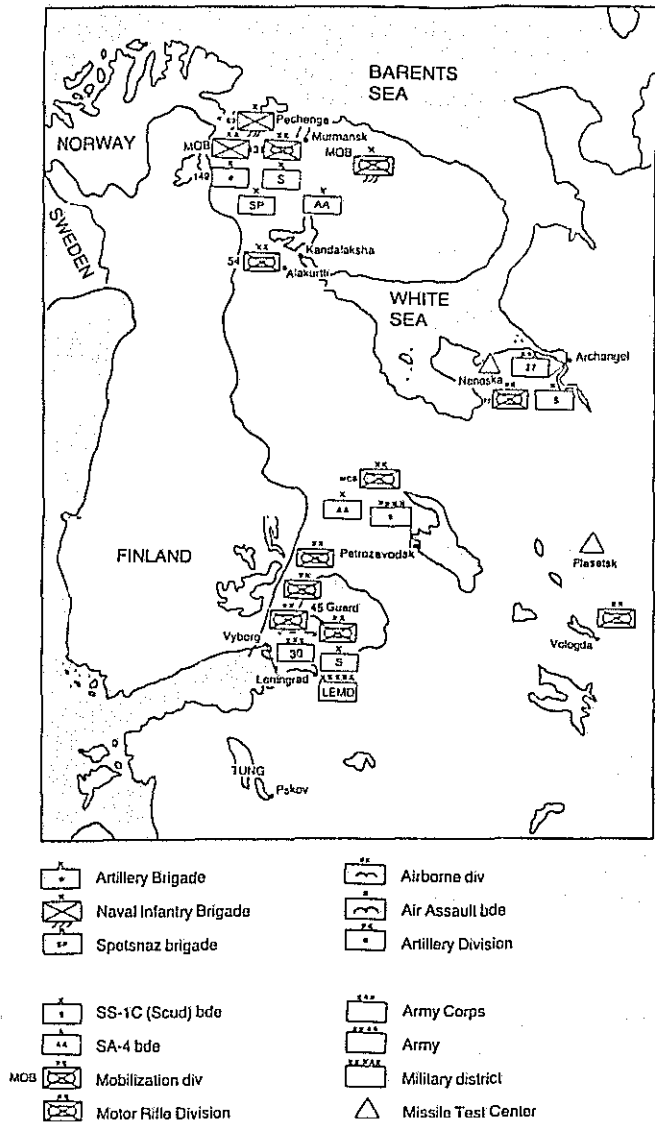
Soviet ground forces presently located on the Kola peninsula

A study of open sources enables us to establish with certainty only the presence of two Category B army divisions on the Kola peninsula: the 131st Motor Rifle Division in the Murmansk-Pechenga area and the 54th Motor Rifle Division at Alakurti-Kandalaksha. (One Category B division at Vyborg is not considered further in this study). The eight remaining motor rifle infantry divisions in the Leningrad Military District belonging to Category C are deployed in other parts of the district. However, the existence of an army headquarters in Petrozavdosk (6th Army) and two corps headquarters in Archangel and Vyborg have been established. On this basis, it is reasonable to assume that a number of support units at corps, army and front (MD) level are situated in the Kola region. The Order of Battle for the entire district is therefore likely to read as follows:

- 11 motor rifle divisions
- 1 airborne division (76th Guard Airborne Division at Pskov, under direct command of the General Staff)
- 1 artillery division (ca. 300 guns and multiple launch rocket systems)
- 1 artillery brigade (90 guns/howitzers)
- 1-2 SS-1 Scud missile brigades (each with 12-18 missiles with a range of 280 km)
- 2-4 SA-4/SA-12 air defence brigades
- 2 pontoon bridge construction regiments (each with 118 m cl 60 bridge)
- 1-3 engineer brigades
- 1-3 assault engineer battalions (each with 48 ferries and 18 amphibious transport vehicles)
- 1 air assault battalion/army
- 1 air assault brigade/front
- 1 transport helicopter regiment (44-64 transport helicopters)
- 1 regiment of combat helicopters (64 attack helicopters)
- Approximately 1,200 men in special forces units (Spetsnaz)

In addition to this, there are also numerous communications, supply, and maintenance units located in the district.

Soviet ground forces in the Leningrad Military District



Source: The Military Balance, Norwegian edition, The Norwegian Atlantic Committee.

The naval infantry brigade at Pechenga is attached to the Northern Fleet, and is therefore part of the Soviet Navy. However, this particular brigade is an important factor in the overall balance of ground forces in the region, and is therefore included in the subsequent discussion. Equipment for a Category D naval infantry brigade has been prepositioned in the Kildin area, though this brigade is clearly of less importance than the standing naval infantry brigade.

As far as offensive capabilities are concerned, primary interest is attached to the sea- and air-assault units, fire support units, elements specially equipped for crossing of watercourses and other natural obstacles, and, finally, the motor rifle divisions. An attempt to define 'reasonable sufficiency' for ground forces in the Kola region must therefore concentrate on them.

Structural limitations

As indicated earlier, limitations on Soviet ground forces on the Kola peninsula should fall into two categories: structural and operational. Structural limitations should regulate five characteristics:

- Type of unit
- Number of units
- Combat readiness of each unit
- Equipment of each unit
- Location of unit (in garrisons)

Where it is applicable to impose structural limitations, units are listed in Table I. It is recommended that readers unfamiliar with Soviet/Russian military organisation and terminology first consult Annex A where the most important unit categories are described in greater detail. In Annex B the different categories of combat readiness are defined.

Some of the proposed limitations will, in principle, have the same effect. For example, reduced combat readiness and re-deployment of army units away from forward locations will both increase warning time.

Table 1

Type	Number Before/ After	Category Before/ After	Hardware After	Location After
Mot. inf. division	2/2	B/C	No tank regt.; one tank coy.; no GSP ferries or PMP bridges in the engineer battalion; no artillery	Kola: Murmansk Kandalaksha
Mot. inf. division*	9/9	C/C		Southern part of LEMD, including Petrozavodsk, Vyborg and Archangel
Naval inf. brigade	1/1	A/C	Special craft only for one battalion	Archangel/ White Sea
Airborne division	1/1	A/C	No restrictions	Pskov
Air assault brigade/front	1/1	A/C	Not co-located with aircraft/helicopters	South of 65 deg. lat./ east of 40 deg. longt.
SS-1/ SS-21 brigade	unchg.	unchg.	unchg.	South 65 deg. lat./ east 40 deg. longt.
Artillery brigade/ Kola	B/D	normal organi- sation		South 65 deg. lat./ east 40 deg. longt.
Artillery division	unchg.		normal organi- sation	South 65 deg. lat./ east 40 deg. longt.
Pontoon regt.	—	—	—	—
Assault engr. bn.	1—3/0	—	—	—

* Including the former Category B motor rifle division at Vyborg.

It may be questioned therefore whether both kinds of restrictions are necessary. The value of different categories of restrictions, however, will depend on the type of unit concerned. Generally speaking, one can argue that small, sophisticated units with a high ratio of personnel categories to overall personnel strength of the unit cannot operate on a cadre basis. This is due to the fact that such a unit simply cannot function without all its separate elements, (since this makes it impossible, for example, to conduct meaningful exercises). For such units, it is more appropriate to insist on withdrawal from forward areas in compensation for allowing it to maintain a high state of combat readiness. This should apply to units at battalion or brigade level that are equipped with special weapons systems or other equipment, e.g. multiple launch rocket systems. On the other hand, units with a lower degree of specialisation, where striking power is due to a large number of essentially simple weapons, can more easily take a reduction in their combat readiness. In short, employing several types of structural restrictions provides more flexibility in a discussion aimed at finding regionally stabilising arms-control measures.

From a Norwegian point of view, it is of particular importance to ensure that certain units and types of military hardware are transferred from Kola to the southern parts of the Leningrad Military District. This may, however, place Finland in a difficult position insofar as the centre of gravity of Soviet forces is shifted to the territory adjacent to central and southern parts of Finland. In order to avoid this, some proposals to the effect that units should be moved to areas within the Leningrad Military District that are both south of 65 degrees latitude and east of 40 degrees longitude have been made.

Motor rifle divisions

Soviet authorities have expressed the intention to reduce forces in the Leningrad Military District to a level of 22,000 men, and to reduce the number of tanks by 700.² Within this framework, the following strength of army units may be envisaged in the district as a whole:

- 2 MRD Category C (30%)	7,800 men/132 battle tanks
- 9 MRD Category D (5%)	5,850 men/330 battle tanks
Sum	13,650 men/330 battle tanks

The remaining reductions to 22,000 must be shared among artillery, engineer and airborne units.

To expect reductions along these lines is wholly reasonable given the very low number of standing units in North Norway. The reductions would mean that only one motor rifle regiment within each division would be fully manned in peacetime. By using the two previous contingents of fully trained national servicemen, the divisions could be brought up to strength on mobilisation. This will require some time which is the intention behind our proposal.

The amount of time it will take for larger forces to be concentrated on the Norwegian side means that there will be enough time for units to be assembled on Kola. This means that Category C represents a sufficient level of combat readiness for Soviet units.

Furthermore, the very low number of battle tanks on the Norwegian side suggests that there is no need for the Soviet Union to maintain a standard number of battle tanks per unit. When the threat from enemy tanks is absent, there is little need for a huge anti-armour capability. Thus the only remaining reason for maintaining battle tanks is as an instrument of offensive warfare. A reduction of Soviet tanks to one tank company per motorised infantry regiment would therefore appear reasonable. The independent regiment of each division should be completely disbanded. In terms of numbers, this should constitute a reduction of ca. 700 from the present level as a minimum.

Finally, we propose that the divisional capability to cross major watercourses be disbanded. This concerns first of all PMP pontoon bridges (cl 60) and GSP craft. It should be emphasised that such hardware may be maintained for use on the Soviet side of the border. An agreement should be reached that allows for the storage of such equipment in sites located at the relevant bridgesites. It is above all the *mobile* bridging equipment that represents an offensive capability, and which must therefore be removed.

The naval infantry brigade

For the standing naval infantry brigade we propose that its combat readiness be reduced to Category C. This would mean that only one battalion would be operational at any time. Since naval infantry represents a crucial component of the offensive potential on Kola, it is further proposed that the entire brigade be located to the White Sea/Archangel area. In addition to this, special amphibious ships associated with the brigade should be limited so that the Northern Fleet in peacetime is only capable of carrying one operational battalion. Additional ships should be moth-balled or transferred to other maritime theatres. It would be unreasonable to propose, however, a complete removal of the brigade given that naval infantry is an integral part of most major navies. The withdrawals and the reductions suggested will provide, however, a more correct balance when we bear in mind the time period needed for allied reinforcements (UK/NL LF, NALMEB) to reach North Norway. In terms of mobilisation readiness, the brigade can easily maintain with production capacity at the Category C level, and this does therefore not constitute a valid objection. The naval infantry brigade at Category D ought also to be moved to the area around the White Sea.

Airborne units

For the different categories of airborne units, the same principles as those proposed for the naval infantry should apply. Airborne units are, however, even more flexible, and the largest formations (airborne divisions and brigades) may pursue independent strategic goals in addition to providing operational support for other troops. Such versatility combined with the total absence of similar forces on the Norwegian side necessitate relatively strict limitations.

The airborne division (76th Guard Airborne Division in Pskov, west of Leningrad) is not under the command of Leningrad Military District, but is under direct control of the highest military authorities in Moscow (i.e. the General Staff). It is nonetheless reasonable to assume that the division is earmarked for operations in Scandinavia. This division should be converted to Category C

status by placing two airborne regiments and two battalions in the artillery regiment on mobilisation status. This is sufficient for production of trained personnel to maintain the division by making use of the two last contingents of national servicemen on mobilisation, but, since parachute training will be required for the division to be fully operational, this could be observed and, hence, provide early warning.

The air assault brigade in the Leningrad Military District is clearly more of a regional force. Still, this brigade can be used as a rapid deployment force in a strategic or operational context. As far as Norwegian interests are concerned, it is therefore of crucial importance that limitations be imposed on this brigade in a manner which will secure both time and early warning. Our proposal is to reduce the brigade to Category C status, redeploy it to the southern part of the Leningrad Military District, and finally, separate the unit from the air-lift capability needed for operations to be conducted. These measures will provide early warning of deployment by observing prior concentration of aircraft and helicopters. Similarly, the need for helicopters to refuel will also increase flight-time.

The air assault battalion (6th army) is designed for tactical tasks, and therefore does not have a strategic character. Moreover, it is not practical to reduce combat readiness categories at the battalion level. No proposals are therefore made with respect to this unit.

Fire support units

As far as these units are concerned, particular emphasis is placed on the need to withdraw one brigade of SS-1 Scud tactical ground-to-ground missiles. The range of each missile is 280 km, and they are capable of carrying conventional, chemical, and nuclear warheads. This is a weapons category that will be included in a possible future treaty limiting short-range missiles in Europe. However, until such an agreement is reached Norway must stress the need for deploying this brigade in a distance from the Norwegian border that exceeds the range of the Scud missile itself. A similar problem exists with the Frog ground-to-ground missiles that form part of the motor rifle divisions discussed above. These missiles have so far been placed in one battalion with 4 missiles per division. It is assumed, however,

that the missiles will be concentrated in a brigade at army level. The army is equipped with SS-21 Spider missiles, with a range of 120 km, and with the same range of possibilities as the Scud when it comes to types of warheads. The shorter range of these missiles means that an individual missile will be able to reach Norwegian territory if deployed just east of Murmansk. Forces must be withdrawn so as to eliminate the possibility of these missiles coming within range of Norwegian territory by way of short tactical re-deployment of their tracked launchers. In other words, it should be demanded that the missiles be transported by rail or on trailers in order to reach deployment areas within striking distance of Norwegian territory. They must therefore be stationed at a minimum distance of 200-300 km from the border, adding to that the range covered by the missile itself. The aforementioned consideration of Finnish interests also requires these units to be moved to the southern part of the Leningrad Military District.

As for the artillery brigade stationed on Kola we propose to move it south and eastwards. If this restriction is seen in conjunction with the closing down of the two artillery regiments mentioned above, this would entail a reduction of ca. 230 artillery pieces of all types on Kola. In practical terms this would reduce the overall number to roughly half the present level. Other artillery units at army and front-level should only be affected by a reduction in combat readiness (i.e. see the above discussion of the value of imposing different forms of restrictions on different types of unit).

Engineer units

For special engineering units at higher levels, the same considerations apply as for engineer elements of the motor rifle divisions. That is to say, the offensive potential inherent in equipment designed to facilitate the crossing of major watercourses should be reduced. If the capacity to overcome natural barriers on the Soviet side is secured by the prepositioning of equipment at the relevant sites where bridges may be constructed, there is no longer any need for maintaining assault engineer battalions and pontoon regiments. These should either be disbanded or removed from the Leningrad Military District altogether.

Special forces

Soviet special forces (Spetsnaz) can be found at different unit levels and are represented in both the navy and the army. There is little reason to assume that the Northern Fleet's special forces brigade is the only one permanently stationed on the Kola peninsula. The functions of special forces in war range across a wide spectrum of activities from regular long-range reconnaissance patrols on the one hand, to raids, sabotage, subversion, and assassinations on the other. The dependence of modern societies on exposed and often unprotected installations — e.g. telecommunication and energy facilities — makes them highly vulnerable to the kind of threat represented by special forces. Well prepared and coordinated use of such forces may lead to an early collapse of organised resistance; a collapse induced by practical as much as by psychological factors. From the point of view of an attacker, planning for the use of special forces has several advantages:

- The threat is hidden and anonymous, and may be difficult to distinguish from terrorist and grave criminal activities.
- Compared to more traditional operations, the cost of employing special forces is small, with only limited damage to the infrastructure of the state being attacked.
- Low intensity operations as practiced by special forces will reduce the danger of escalation to the nuclear level or to a higher level of conventional conflict.

A cost-benefit analysis therefore appears to place a premium on the use of special forces. Thus, it is not wholly unreasonable to pose the question of whether this type of operation may not in the future acquire the character of an independent form of military strategy rather than just being an adjunct to traditional operations. In other words, special forces may be used as a form of state-controlled terrorism, the aim of which would be to destabilise another state by fostering anarchy and causing the government apparatus to collapse. Such a condition can then be exploited by political or military means. Politically, the state may be forced to adopt repressive measures to combat the terror, something which in turn may be used for propaganda purposes. Militarily, by neutralising

the armed forces of the country thereby easing the way for quick and effective occupation of selected areas.

In this context, it is interesting to examine the prospect of an isolated attack against Norway or a larger part of Scandinavia. An attack that is, militarily speaking, non-traditional, launched after years of gradual erosion of the bloc system, which will complicate allied efforts to provide support. This might further raise the attraction of using special forces as an independent strategic alternative. This fact only heightens the need for establishing limits that seek to regulate the size and activities of such forces.

Several factors, however, ensure that it is extremely difficult to apply the limitation criteria hitherto used with regard to special forces. The reasons for this include:

- The absence of special equipment allowing for easy identification, since special forces will only have small arms and standard equipment. An exception may be specialised equipment for sabotage or communications over long distances, but this may be easily disguised.
- The size of special forces units may be very small, enabling them to move in and out of larger garrisons undetected.
- The combination of light equipment and small numbers of soldiers provide a high degree of strategic mobility, so much so that the location of the garrison from which units operate may be largely irrelevant.

It follows that the threat posed by special forces derive more from their *modus operandi* than from any specific force criteria we may choose to apply. In other words, it is the specialised training received by these forces as well as the nature of their missions that make them so dangerous.

It is unrealistic, therefore, to require structural limitations on special forces at a regional or local level since verification measures would be impossible to implement in practice. Such limitations can only be part of a wider agreement between both alliances, although even this appears to be a remote prospect. There is a possibility, however, that units exclusively reserved for subversive activities (e.g. assassinations etc.) may be disbanded completely, based on the assumption that the existence of such units cannot be kept secret over time if they do indeed exist. As far as Soviet forces are concerned, this would involve the closing down of HQ companies of the special forces regiments, since the so-called anti-VIP

capacity is assumed to reside in these. Defence against the threat posed by these special units must, however, continue to be based on our own counter-measures.

Operational limitations

Operational limitations will serve as confidence-building measures similar to those already agreed to in the so-called Stockholm Document of September 1986. A treaty whose provision will apply specifically to the Northern region should therefore conform to the Stockholm agreement as far as possible. The principal features of the 1986 treaty are:

- Notification must be given of all military activity involving more than 13,000 ground force troops or 300 battle tanks, organised as a division or as two brigades/regiments. A sub-ceiling for special types of forces requires notification of more than 200 aircraft sorties or manoeuvres involving amphibious or airborne forces in excess of 3,000 men.
- Notification must be given 42 days before the commencement of activities (manoeuvres/troop movements).
- In case of activities involving more than 17,000 men (5,000 amphibious/airborne troops), observers must be invited.
- Notification at least one year in advance must be given for activities involving anything from 40,000 to 75,000 men, and for activities involving units over 75,000 men, two years in advance.
- A catalogue listing the next year's activities requiring notification is to be exchanged each year.
- Verification may be conducted either by satellite or by on-site inspection. On-site inspection must be notified 24 hours in advance, and inspection may then last for 48 hours.

A special treaty must be based on an attempt to apply these measures to the local conditions in the Northern region. On a general level, the basic principles of the agreement can be applied without modification. However, individual sub-ceilings for different force categories should be reduced to reflect the lower force levels in the area. We propose therefore that the principal features of the Stockholm agreement listed above be modified to reduce existing ceilings to ca. one-third of the present level. More specifically this would entail the following adjustments:

- There must be notification for all activities involving more than 5,000 ground force troops or 100 battle tanks organised in brigades/regiments. A sub-ceiling of 50 sorties and amphibious or airborne activity involving more than 1,000 men must be agreed.
- Observation ceilings must be equated with the ceilings set for notification of activities.
- There must be notification at least one year in advance for all activities involving 10,000 to 25,000. For any activities involving more than 25,000, the requirement must be two years prior notification.

In practice, these provisions will mean that what has already been established as the normal, routine pattern of exercises on both sides can be maintained, whereas any increase of activity above this level will be affected by notification and verification procedures. It will, for instance, be impossible to upgrade the motor rifle divisions to Category A status without one year's prior notification. The point, in other words, is to allow tactical units to continue activities unhindered by the treaty, whereas operational formations requiring concentration in order to conduct larger operations will exceed the ceilings drawn up in the treaty.

We also propose confidence-building measures of a different kind: Norwegian authorities ought to press for an opening of the Soviet- Norwegian border in South-Varanger so that the conditions that existed when, what is now Soviet territory was Finnish, are reestablished. This might lead to adjustments in the Soviet border guard force along NATO's northernmost frontier.

Soviet restructuring in the North — naval forces

Introduction

Naval arms control is still not on the arms talks agenda, though the Soviet Union is pressing for its inclusion. Soviet initiatives so far have concentrated on proposals for the establishment of zones within which naval activity will be prohibited. The United States has rejected this approach in part because such zones would interfere with the principle of the freedom of the seas, but also because the problems of monitoring compliance to a treaty would be very considerable.

Negotiations about arms control and confidence-building measures at sea have been dominated by groups and officials with limited knowledge of maritime issues and naval military matters. For this reason, there has been a tendency to try to transplant the principles guiding negotiations about ground forces directly to the naval environment. It may be useful therefore to examine some of the factors that are likely to influence naval thinking in this field. It should be borne in mind that arms control at sea must be seen in a global perspective, and that the principal actors are the superpowers, the United States and the Soviet Union. The possibilities for local actors to influence developments will be limited. If naval arms negotiations do take place, a discussion of some of the factors mentioned above will provide a convenient framework within which to assess possible implications for Norway's security predicament.

We have chosen to treat the Soviet principles of 'reasonable sufficiency' and 'defensive defence' seriously, something which in turn means that, in certain areas, the Soviet Union should accept unilateral initiatives in the North. It is particularly important to examine Soviet offensive potential more critically. Reductions can here be made which would not jeopardise the country's capacity to defend itself.

Freedom of the seas

The rights and duties of coastal states have gradually been extended as a result of changes in the international legal regimes governing economic zones and activities on the continental shelf. The extension of coastal state jurisdiction that has taken place may be thought of as challenging the very idea of the freedom of the seas, a fundamental principle for seafaring nations. Important maritime powers, most notably the United States, have stressed the need to counteract 'creeping jurisdiction' and the attempt to 'territorialise' waters traditionally open for innocent passage by all nations. To underline its determination to uphold the right of innocent passage, the U.S. Navy every year conducts exercises in the Baltic and the Black Sea.

In order to regulate relations at sea, nations have created rules governing maritime activities. The most important of these are the International Regulations for Preventing Collision at Sea, and the international book of signals which makes communication at sea possible between seafarers speaking different languages. In addition to this, coastal states regulate maritime traffic in narrow straits, archipelagic sea lanes, and ports. Regulations range from rules prescribing sea lanes and use of harbour pilots to the control of entry and exit through straits and so forth. The most recent development in this field has been the series of agreements between the USSR and Western powers, including Norway, concerning the prevention of incidents at sea.³

Economy and environment

The use of the sea for military purposes represents only a small fraction of all maritime activity. Maritime economic activity can be grouped under three main headings:

- Transport of goods
- Exploitation of living resources
- Activities on the continental shelves

Within the spectrum of activities covered by these three categories numerous conflicts can and do arise. For example, petroleum exploration on the continental shelves may threaten traditional

fisheries, and too many countries fishing for a particular breed of fish may deplete resources. Similarly, tension may arise where petroleum and fishing activities coincide in an area with much shipping traffic. These are only some examples of conflicting interests that may occur in connection with the utilisation of the seas' resources.

The regulation of activity in a manner acceptable to all interested parties is a natural response to the challenges outlined above. However, any attempt to create a common code of conduct of this sort may lead to differences of opinion as to the fundamental principles. Some parties may choose to stress the freedom of the seas and the right of innocent passage. Others will assert the prerogatives of coastal states, not least because they may want to safeguard themselves from environmental disasters that might be caused by certain activities at sea.

Conflicts of interest among coastal states and users are likely to increase in the time to come. Many coastal states will undoubtedly try to consolidate jurisdictional rights over their continental shelves and within the exclusive economic zone (EEZ). A greater awareness of how limited some resources, living and non-living, actually are, paralleled by an increasing concern about the fragile state of the environment, will reinforce this tendency. Since most maritime powers are also coastal states, a convergence of views can be expected in many areas. Still, some maritime powers will regard most attempts at regulation as an infringement of the principles of innocent passage and freedom of the seas. The tug-of-war between coastal states and users will also affect naval activity. To a greater extent than ever before navies may, for example, find themselves engaged in the task of ensuring that regulations are adhered to in coastal areas with many users. On the other hand, some coastal states are likely to propose regulations aimed at limiting the activities of navies in certain areas, for example, in the conduct of exercises in their economic zones.

The uniqueness of naval forces

Mobility is a defining attribute of naval forces, allowing them, when required, to be employed as flexible instruments of diplomacy for governments. The flexibility of naval forces in terms of performing

different tasks means that they frequently perform missions for which they were originally not intended. A nation that has invested in naval capability cannot easily write off its capital investment. Moreover, in specific situations naval power may provide freedom of manoeuvre which in turn increases the scope for a state to influence developments along desired paths.

An important difference between naval and ground forces is the relationship between forces needed by a defender versus the forces needed for the attacker. It is an often quoted rule of thumb that in a landbattle the attacking force must acquire a local superiority of 3:1 in order to be reasonably confident of success.⁴ At sea this relationship is reversed. Under normal circumstances a defender will employ 6 to 12 times more resources than the attacker (e.g. in ASW- or mine-clearing operations). In other words, in a sea battle, tactical advantage accrues from being on the offensive and maintaining the initiative.

The Northern Fleet

The bases that have been constructed along the ice-free fjords of the Kola peninsula provide the Soviet Northern Fleet, geographically speaking, with certain obvious advantages compared to other Soviet fleets as far as «blue water» access is concerned. This is particularly evident compared to the Baltic and the Black Sea Fleets, both of which must transit narrow straits in order to reach open oceans. This has meant that as Soviet maritime ambitions increased throughout the 1960s and 70s, the Northern Fleet expanded at the expense of the other two European fleets. The Pacific Fleet has witnessed a comparable expansion, with growth being particularly strong in the latter part of the 1970s. These trends serve to underline the fact that the naval build-up must be seen in a global perspective, something which was also stressed in admiral Gorshkov's writings in the 1970s.

Norwegian interests

The build-up the Northern fleet, therefore, has served global objectives and is not directed specifically against Norway. Does this

mean that Norway need not be concerned? Unfortunately, matters are not so simple. The flexibility characteristic of the operational use of maritime forces clearly has a detrimental impact on Norwegian security. We have to live with the fact that the Northern Fleet is our neighbour and routinely operates outside our doorsteps. Furthermore, we have to accept that the fleet can be employed locally even though it was created primarily to serve global purposes. It should also be stressed that the strength and the size of the Soviet Northern Fleet means that Norway's relative naval capabilities will remain insignificant in any naval disarmament measures. Our units do not possess an offensive capability beyond the local, tactical level, and do not represent a military threat to the Soviet Fleet and the base-complex on Kola. This also means that Norway is not in a position to influence the escalation of great power conflict taking place in our waters. For this reason, we need not be concerned that our defensive measures, such as mobilisation and minelaying in territorial waters, will serve to fuel a crisis. The strength of the Norwegian Navy resides in its capacity to conduct local, defensive operations along the Norwegian coast. This implies a capacity to prevent fait accompli situations from occurring and allows for the maintenance of organised resistance.

Capabilities of the Northern Fleet

As far as Norwegian security considerations are concerned, the actual configuration of the Northern Fleet remains important. In order to assess the value and the impact on Norwegian security of arms control and confidence-building measures at sea, it is useful first to examine the configuration of the Soviet Northern Fleet.

What follows is an overview of the principal categories of combatants and aircraft attached to the Northern Fleet, and an assessment of their impact on Norwegian security. Annex C provides a schematic representation of the structure of the Northern Fleet.

The number of *submarines with ballistic missiles (SSBN)* is decreasing as the new Typhoon-class submarines enter service, and as the older Yankee-submarines are converted to perform other tasks (SSGN/SSN). Thirty-eight operational SSBNs are currently

deployed with the Northern Fleet. In addition to this, a sixth Typhoon-class submarine has been launched. Most of the strategic submarines in the Northern Fleet are of the Delta-class.

It is frequently argued that the principal task of the Northern Fleet is to protect these strategic assets, i.e. the sub-surface platforms for launching intercontinental ballistic missiles (SLBMs). Supposedly, the strategy consists of deploying SSBNs to operational areas which are then defended by the other ships/combatants of the Fleet. Submarines, surface ships and aircraft of all categories coordinate defense in depth to guard SSBNs deployed on patrol. It is rarely mentioned that the strategic submarines also possess the capability to defend themselves. The weapon of defence has traditionally been torpedoes, though one may assume that more and more submarines will be equipped with anti-submarine missiles (as with the new Typhoon-class). At some later stage they might also be equipped with missiles for attack against surface combatants, a version of which can be launched from the torpedo tubes.

If we also bear in mind that the latest generation of Soviet strategic submarines are quieter than earlier generations, and moreover that Typhoon- and Delta IV-class submarines are designed for operations under the ice cap, we see how this might enable the Northern Fleet to place greater emphasis in the future on offensive operations with tactical submarines. The reason for this is simply that the need to allocate submarines for the protection of the seabased retaliatory strike force will diminish as a result of increasing difficulties involved in the detection and localisation of strategic submarines. Dispersal of SSBNs may therefore be an alternative to operations in defended 'bastions'.

On the other hand, if the number of strategic submarines is reduced the corresponding importance of each of these platforms will increase. Hence, each Typhoon-class submarine carries with it 20 SS-N-20 SLBMs, each missile with 6-9 warheads. This means that one vessel may carry a weapons load capable of attacking as many as 180 individual targets. This would suggest a need for more rather than less protection.

Nonetheless, it can be safely concluded that leaving strategic submarines to operate on their own entails less of a risk than it has previously. This means that tactical submarines can be given tasks beyond defensive barrier operations intended to protect SSBNs.

Greater freedom to release resources for other missions enhances flexibility of use for the submarine fleet as a whole. This may improve the possibilities for seizing the initiative in a battle for sea control in the North Atlantic.

The Northern Fleet has 36 submarines equipped with *cruise-missiles and long-range missiles (SSGNs)* for use against principal surface combatants. Five of these are Oscar-class submarines, each one of them carrying 24 SS-N-19 long-range missiles intended for use against major surface units. In the same category we find the converted Yankee-class, as well as the more modern Sierra- and Akula-class submarines. These submarines are all capable of carrying cruise missiles that are likely to be launched against land-targets (SS-N-21-SLCM). They represent a new stage in the development of submarines. Since they are capable of carrying missiles, torpedoes, and mines in one and the same tube, the types of weapons carried by each submarine will be tailored for the particular mission the submarine is intended to perform (e.g. attack against targets on land, other submarines, carriers or merchant shipping). This allows for a measured and flexible response to different situations. In other words, these are multi-purpose units.

The Northern Fleet has 93 *attack submarines with torpedoes (SSN/SS)*. The majority of vessels within this important category consists of 33 Victor-class and 30 Tango- and Foxtrot-class submarines. High endurance capacity means that SSNs are extremely versatile. They can be employed in an offensive capacity against U.S. and other NATO SSBNs, as well as against surface combatants and merchant shipping. They are also well-suited to a more defensive role; i.e. defending Soviet SSBNs against allied ASW-units.

The Northern Fleet has two Kiev-class *carriers*, each with a standard displacement of 43,000 tons and conventional propulsion. They are classified as Guided Missile V/STOL Aircraft Carriers (CVHG). This means that as well as serving as a platform for aircraft with vertical take-off and landing capabilities, the Kiev is a missile-carrying vessel. The air wing on board each carrier consists of 13 Yak-38 Forger V/STOL fighters and 16 KA-25 Hormone/KA-27 Helix helicopters. In addition to this, each ship is equipped with 16 SS-N-12 Sandbox anti-surface missile with a range of 550 km.

According to Soviet sources the Navy's most recent carrier, the Tbilisi with standard displacement of over 60,000 tons, is going to serve with the Northern Fleet. The vessel will probably operate with either SU-27 Flanker and/or MIG-29 Fulcrum and SU-25 Frogfoot. All these types of aircraft have successfully completed tests with the Tbilisi while on exercise in the Black Sea. The air wing is expected to consist of ca. 50-60 planes. A sistership (Riga) is under construction, and work has also commenced on a third carrier, which is expected to be about 10,000 tons larger than Tbilisi.

If one or more of Soviet Union's new CTOL-carriers are deployed to the Northern Fleet, this will add a *new dimension* to the maritime situation in the North. The introduction of the SU-27, with the NATO designation of Flanker, will provide the carriers with highly advanced all-weather air-defence fighters. Importantly, these fighters will enable Soviet aircraft-carriers to provide protection for other surface units in areas beyond the range of land-based naval aviation. It is also clear that SU-25 Frogfoot, which corresponds to the American A-10, is well-suited for providing close air support to ground forces in connection with, say, amphibious landings. The new carriers, may in other words, significantly increase the scope for operations involving surface combatants in Western waters, as well as improving the Navy's capacity to provide forward air defence and support amphibious landings on NATO territory.

The new carriers cannot be justified with reference to the objective of «showing the flag,» as this would appear to contradict the declared goals of Soviet foreign policy with respect to regional conflicts and the emphasis now being placed on the need to reduce military presence in peripheral areas and in distant waters. Even if the Soviet Union chooses to stress the defensive purposes of its deployments, it is clear that Soviet carrier groups operating in Western waters will be perceived as posing a serious threat to littoral states. This in turn will destabilise relations with the Soviet Union.

With the exception of aircraft carriers, the Kirov-class (CGN) *cruisers* constitute the largest military vessels built after the Second World War. These cruisers are nuclear-powered with a displacement of 28,000 tons. The principal weapons carried by each ship are 20 SS-N-19 long-range ship-to-ship missiles with a range of up

to 550 km. Two Kirov-class ships are attached to the Northern Fleet. In addition to this, the Northern Fleet includes 2 Kresta-I, 7 Kresta-II, 1 Slava and 2 Sverdlovsk-class cruisers. Excluding the Kiev-class, the Northern Fleet consists of 14 cruisers.

22 *destroyers* of various types are attached to the Northern Fleet. It is sufficient here merely to mention that 6 of these belong to the Sovremenny-class, a well-equipped destroyer whose main weapon is the SS-N-22 ship-to-ship missile with a range of 100 km. The five Udaloy-class destroyers are modern anti-submarine combatants, whose main weapons are the SS-N-14 Silex anti-submarine missiles with torpedoes having a 50 km range. Both these classes of destroyers are suitably designed for acting as fleet-escort vessels for a battlegroup based around Tbilisi-class carriers, the Kiev-class ASW-carriers and Kirov-class cruisers. Other cruisers could also act as escorts for such a battle group.

The Northern Fleet also has 25 *landing craft*. These include: 2 Alligator LST (4,600 t), 5 Ropucha LST (4,200 t), 7 Polnocny (800 t) and 7 Surface-Effect Ships — SES.

Northern Fleet Aviation consists of about 400 aircraft. This figure includes maritime strike aircraft/bombers (2 regiments of Tu-16 Badger C and one regiment of Tu-26 Backfire), two regiments of reconnaissance aircraft (Tu-16 Badger D/E/H/J/K and Tu-95 Bear D) and ASW aircraft (Il-38 May, Be-12 Mail and Tu-142 Bear F). The Northern Fleet has also sea- and land-based fighter-bombers (Yak-38 Forger), ASW helicopters (Mi-14 Haze, Ka-27 Helix and Ka-25 Hormone), in addition to transport aircraft and helicopters. (see also page 36).

Possible restructuring and its impact on Norwegian security

General remarks

In the following discussion, a distinction will be kept between disarmament and confidence-building measures.

It is still not entirely clear how the ongoing START negotiations eventually will affect seabased strategic systems (SSBNs) and the

arsenal of SLBMs associated with these. Possibly, mutually acceptable force ceilings will reduce the overall number of SSBNs on both sides. However, as indicated earlier, the number of SSBNs in either the Soviet or the U.S. Navy will have no direct military bearing on Norway.

Defence expenditure cuts and the technological trend towards larger submarines with a greater concentration of missiles and warheads on each platform also point in the direction of fewer SSBNs. A START treaty may thus increase the relative value attached to each of these units. Such a development will also mean that the importance of SSBNs held by other nuclear powers will be boosted relative to the submarine-based nuclear weapons held by the two superpowers. In short, if the number of American and Soviet submarines is reduced to, say, 20 each, the importance of 10 French and British SSBNs will be enhanced correspondingly.

When it comes to the issue of seabased cruise missiles (SLCMs), the situation is very unclear. Part of the reason is simply that there is a variety of different types of SLCMs. The long-range conventionally-tipped ship-to-ship version is an important weapon against major surface units. Moreover, SLCMs designed for use against land targets are equipped with both nuclear and conventional warheads.

The existence of different versions within one weapons category makes it extremely difficult to agree on proper verification procedures. Moreover, from the point of view of the 'user,' the conventional version of the SLCM is a particularly flexible weapon (i.e. can be used against enemy merchant shipping, opposing naval forces, port facilities and other important targets on land). The future significance of SLCMs as ship-to-ship missiles may depend on developments within the field of high-energy weapons, such as lasers. A technological breakthrough in this field may not favour cruise missiles, particularly not those intended for use against larger surface units. An effective laser air defence shield, combined with modern detection and control-systems, may significantly reduce the vulnerability of surface combatants to missile attack. However, feasible solutions in this area will probably not be implemented as operational systems within the time-frame of this study.

Even with a START treaty, there will still be a need to protect the seabased retaliatory force. Fewer SLBM platforms may in fact

increase the importance of protecting these assets, even if the new generation of SSBNs are quieter and more capable of defending themselves.⁵

These examples show that the central strategic balance between the superpowers creates a need for weapons to be categorised by defensive considerations. It also shows that disarmament at sea must be done by the superpowers. Nonetheless, it is still worth assessing the type of measures that will serve Norwegian interests.

Reductions in the Northern Fleet

Reductions spurred by economic factors and aging vessels

President Gorbachev has encountered serious problems in attempting to accelerate the pace of his economic reform programme. He therefore needs to make capital available for civilian purposes. Despite this, the Soviet Union continues to stress the need to improve the quality of its navy. A clear discrepancy between declaratory intent and practice is therefore noticeable. It is difficult to accept that Moscow is seriously interested in naval disarmament while costly navy construction programmes continue in spite of general economic hardship.

In much the same way that the United States reorganised its Navy by taking older ships out of service in the 1970s, the Soviet Union has withdrawn a number of older surface vessels and submarines from the Northern Fleet. The Soviet Union does probably not want to notify other powers about this, since it would mean giving up a bargaining chip or the possibility of a propaganda coup. The phasing out of these ships can be presented by the Soviet Union as a new initiative intended to accelerate the process of naval disarmament. If this argument is used at the negotiating table, it could lay a pressure on Western defence budgets, and be an effective tool to reduce the number of naval units in NATO. If the objective is to maintain a strong Soviet navy, this also explains the Soviet urge for naval disarmament talks to start as soon as possible. If agreement is reached, older models can quickly be disposed of, thus reducing running costs. At the same time, Moscow can

encourage the Western powers to scale down the size of their navies.

Regardless of whether this is achieved, the number of units in the Northern Fleet will have to be reduced in the years to come. Older models sooner or later will have to be phased out for economic reasons, even if this is not part of a treaty agreement. There is probably neither the political will nor the economic basis for a replacement of ships at a 1:1 ratio.

A similar structural form of disarmament is currently also taking place in most Western navies, even though improvements in East-West relations will, certainly in the first instance, affect navies rather less than ground forces. Unlike naval forces, ground forces are of course directly affected by the CFE talks. Thus the relative importance of sea power will probably increase. There are clear indications, for example, that the Royal Navy will be accorded greater priority in the future. The absence of real growth in defence expenditures, however, will also mean that the Royal Navy must operate with fewer units in the foreseeable future.

Reduced allocations combined with a changing perception of threat may lead to a new debate, the contours of which we have already seen within the U.S. Navy. Navy personnel with different service backgrounds will discuss new mission structures, and the priorities, platforms and weapon systems that are likely to be most cost-effective. A similar debate is taking place in the Soviet Union.⁶ The Tbilisi programme, for example, has drawn much criticism both because of its costs but also because it is thought by some to be in conflict with the declared defensive doctrine.

Since Norway is dependent on reinforcements from allied maritime powers, it needs not be to our advantage as a neighbour to a land-military superpower that navies are reduced. However, advantages can be obtained if naval arms control agreements succeed in removing those elements most threatening to Norwegian security. It is most likely, however, that for the foreseeable future most reductions will take the form of unilateral cuts. It will probably take some time before negotiations about asymmetrical cuts can begin.

As far as the reduction of Soviet naval forces is concerned, one should at least expect the Soviet Union to reveal the *operational size* of the Northern Fleet. Otherwise it will be impossible to decide

what constitutes real reductions as opposed to merely a phasing out of older models.

Politically conditioned disarmament — numerical reductions

Ships and aircraft

Restrictions should be placed on the number of Soviet submarines, surface ships and maritime combat aircraft whose missions are clearly of an offensive nature. The number and types of units to be affected by such restrictions must be the object of separate negotiations between the superpowers. Here, we shall merely argue that Soviet reductions ought to be based upon a recognition of geo-strategic realities. NATO is a maritime alliance, which depends mainly on the Atlantic sea-lanes of communications (SLOCs). The Warsaw Pact is, on the other hand, a continental alliance, which depends on interior over-land lines of communications. Symmetric reductions in naval forces therefore could have asymmetric implications of the two alliances. Norway has therefore rejected Soviet proposals, which would limit naval access to the Northern Waters on a symmetrical basis since such arrangements would favour the Soviets. More specifically, agreements must reflect the importance that the Atlantic sea lines of communications represent to the West, and a recognition that a latent threat to these will be a permanently destabilising factor. Reduction must also be based on the fact that offensive naval units are difficult to reconcile to what is purportedly a defensive Soviet military doctrine.

In the following paragraphs we shall examine the various roles performed by each category of ships under different circumstances and in diverse contexts. Having examined the significance of various types of units for Norwegian security, we can then suggest what sort of reductions we are interested in seeing.

SSBNs have only an indirect impact on matters affecting Norwegian security. The most important of these are:

- a) They are used to justify the acquisition of other platforms.
- b) Depending on the situation, SSBNs require varying degrees of protection. Thus, other naval units may either be tied down or released for other missions.

c) Since SSBNs threaten the United States itself, the U.S. Navy strategy is to shadow Soviet SSBNs in a crisis and attack them in a war. This means that the Northern region continues to be a strategic flashpoint in relations between the superpowers.

The number of SSBNs in the Northern Fleet is of importance for the central strategic balance between the superpowers, but does not affect Norwegian security directly. However, fewer, quieter strategic submarines with greater capacity for self-defence may allow for a reduction of other units whose primary task now is to protect SSBNs.

Attack submarines are geared primarily towards sea-denial tasks. A strong fleet of SSGN, SSN and SS units, if applied offensively, can prevent allied ships from operating in the Norwegian Sea and along the Norwegian coast. SSGNs (e.g. Oscar-class submarines) operating alongside major surface combatants (e.g. Kirov-class cruisers) and aircraft carrying anti-ship missiles, will pose a grave threat to carriers, amphibious units, troop-transport, ships and merchant shipping. A reduction in the number of attack submarines, therefore, will enhance Norwegian and allied security. It would reduce the Northern Fleet's capacity for sea-denial operations and thus increase the chances of successfully reinforcing Norway and the Central Front in war. The existing number of attack submarines in the Northern Fleet far outweighs purely defensive requirements. In a conflict, a large number of SSN/SSGNs could be deployed against allied SSBNs and SLOCs without endangering defensive missions (i.e. protection of SSBNs).

Aircraft carriers, cruisers and destroyers play an important part in any attempt to secure command of the sea in war, i.e. as a preliminary step to an invasion or simply in order to guarantee free movement on the high seas. Such operations also require a favourable sub-surface and aerial environment. Forward operations by air defence fighters and forward use of submarines are needed to secure such an environment. The use of Norwegian airfields by Soviet fighters will greatly facilitate such operations.

These types of units are also well suited to provide direct support for operations on land, either through shore bombardment or close air support. Any reduction in the number of ships in this category

will have a beneficial effect on Norwegian security. The reasons for this are:

- a) It will become easier to reinforce and resupply Norway, particularly North Norway.
- b) It will reduce the offensive potential of the Northern Fleet thereby reducing the risk of a seabased invasion.

Tbilisi-class carriers in battle group formation with cruisers and destroyers will increase significantly the offensive potential of the Northern Fleet. A reduction in the number of aircraft carriers, cruisers and destroyers held by the Soviet Union will have a beneficial effect on Norwegian security. However, the strategic mobility of this category of ships means that re-deployment to other oceans, for example to the Mediterranean, will only be of limited value.

Naval aircraft. ASW and reconnaissance aircraft are most important for defensive operations. Naval patrol and reconnaissance aircraft whose main task is to gather information are stabilising factors in the maritime environment. Long-range bombers and air-defence fighters, however, constitute a serious threat against allied surface combatants, supply and reinforcements units. A reduction in the number of these will therefore undoubtedly benefit Norway.

In conclusion, any cut-back in the size of the Soviet navy — particularly in the number of aircraft carriers, major surface combatants and attack submarines — will enhance Norwegian security. This assumes that an adequate level of Western naval forces will be maintained, and that regular Allied exercises in Northern Waters will continue. Bearing in mind that the Soviet Union has committed itself to a defensive doctrine, that it is primarily a continental power, and that the number of SSBNs is likely to be reduced, it would not be unreasonable to expect considerable unilateral reductions on the Soviet side. Present capabilities are disproportionate to the principle of 'reasonable sufficiency', and a reduction of SSBNs should reduce the need for attack-submarines and major surface ships. ⁷

Number of weapons

One possible arms control measure at sea would be to set ceilings for certain categories of weapons:

Mines. The Soviet Union possesses a huge offensive minelaying capability. This is true with respect both to the actual number of mines and the number of vessels fitted to carry out minelaying operations. The experiences in mine warfare in the Persian Gulf suggest that the Northern Fleet's minelaying potential poses a serious threat to Norway that heavily depends on allied reinforcements and supplies. This problem is particularly acute in view of the known capacity of Soviet vessels to conduct such operations; aircraft and submarines have also been fitted to lay mines.

Given the Soviet emphasis on a defensive doctrine and the principle of 'reasonable sufficiency', significant asymmetrical cuts in this field should be forthcoming. Yet even a very small number of mines, ostensibly retained for defensive purposes, can be used offensively in Norwegian waters. It is therefore difficult to set specific ceilings on the numbers of mines beyond a general agreement to keep the figure as low as possible.

Cruise missiles and tactical nuclear weapons. It has been pointed out that sea-launched cruise missiles are particularly de-stabilising. This fact applies in particular to long-range nuclear-armed cruise missiles intended for attacks on land targets. It would be in the interest of the Nordic countries that the number of these weapons is reduced. Another proposal is to eliminate all tactical nuclear weapons on naval ships, except submarine-launched ballistic missiles. Removal of all tactical nuclear weapons at sea would be to the benefit of both superpowers, and it would also facilitate removal of long-range nuclear-armed SLCMs. Such steps would also ease the domestic political problems associated with the visit of allied warships to Norwegian ports. The basis for dissatisfaction with the way in which the Norwegian Bratteli Doctrine has been applied will then disappear.⁸

*Confidence-building measures*⁹

General remarks

A code of conduct has developed among seafaring peoples over many generations. The law of the sea, The International Regulations for Preventing Collision at Sea, and international agreements regulating various standards (certificates, marking systems, search and rescue, communication procedures, etc.) have evolved to create a situation where mariners form a kind of international sub-culture. One element of this is the international book of signals that allows for communication between ships with different nationalities. This professional culture is to a large extent based upon mutual trust and confidence. If one wishes to arrive at an agreement on confidence-building measures at sea, it would seem sensible to base such an agreement on existing customs and rules of conduct. Without an understanding of, or respect for, these realities, proposals will not get very far, irrespective of the original intentions.

Sanctuaries

The 'sanctuary' concept has many supporters among academics concerned with the strategic nuclear balance between the super-powers. The basic idea is that strategic submarines — which constitute the second-strike retaliatory force of both superpowers — should be kept in ASW-free areas, or sanctuaries. The idea is to reduce the chances of a conflict escalating to the nuclear level by sequestering the retaliatory force. It might also reduce incentives for a preemptive attack in a given situation.

The sanctuary concept, however, has drawn criticism even though its institutionalisation might appear to enhance crisis stability:

- a. The creation of sanctuaries as part of an international agreement might set a precedent for future territorialisation of international waters, thus further weakening the concept of the freedom of the seas. The counterargument here would be that the creation of sanctuaries only represents a continuation of an existing trend, which is reflected in the

regimes that govern activities in territorial waters, the fisheries zone, and the EEZ.

- b. The question will also arise as to whether other forms of activity, military or civilian, should be allowed in the sanctuary area.
- c. If sanctuaries are set up, how should verification procedures be implemented? Is it possible to monitor adherence to such a regime at all? The development of ever quieter submarines further complicates these issues.
- d. Accepting that verifiable controls and rules can be applied in peacetime, what will happen in the event of crisis or war? If a violation is suspected but cannot be confirmed, is this not likely to destabilise rather than stabilise an already tense situation?
- e. Since the introduction of sanctuaries is certain to complicate allied attempts to reinforce and maintain a naval presence in the region, it would be detrimental to Norwegian security. A treaty embracing the sanctuary principle is therefore not in Norway's interest.¹⁰

Notification of exercises

Notification of exercises — their size, timing and location — may be viewed as an extension of the system known as «Notice to Mariners».

These measures are easy to control. If agreements in this field are adhered to and the system is seen to work, chances are that confidence and mutual trust will be enhanced among naval forces operating in the region. The result will be more cooperation, a reduced level of tension and the institutionalisation of routine contacts.

Over time, however, the practice of notifying manoeuvres may create conditions conducive to surprise attack, i.e. if the notification of an exercise is used as a pretext for preparing and launching an attack. Once a regular pattern of notification is established and confidence is built up, vigilance will probably diminish. Economic constraints may induce countries not to increase their state of alert in response to an exercise which has been notified in advance. If other factors also appear to reduce the element of risk relative to potential gains, a development outlined above will place a premium on initiating a surprise attack, e.g. in the final stages of a major exercise. The final stage of a maritime operation is often an amphibious landing. This means that the normal part of an exercise will

involve building up defences against this contingency. This is precisely where the danger lies. If such a pattern has been regularised, one may, rather than completing the exercise, launch a surprise attack in the opposite direction.

Another weakness in having a notification system is simply that unanticipated deployments will create unnecessary anxiety and may be misconstrued as posing a threat. This, of course, can be counteracted by routinely informing each other about all movements and deployments in areas outside one's own territorial waters. For a variety of reasons, such a proposal will be resisted, not least by the principal naval powers. Such a solution will limit their peacetime and wartime freedom of manoeuvre. Moreover, it might also be the case that a naval power does not wish to inform other parties about its deployments if these are intended, say, to put pressure on an opponent.

In spite of these difficulties, the continued codification of the rules of conduct at sea would seem to serve Norwegian interests. They should include the notification of major naval exercises, but should not seek to influence the movements and deployments of smaller naval units.

Insofar as it enhances confidence, the mutual exchange of information about the movements of major surface units outside local waters is to be welcomed. Such a scheme, however, would probably not be applicable, nor indeed would it be desirable, with respect to submarines. One reason for this is simply submarine concealment and the difficulties of tracking their movements when submerged. Moreover, a credible control regime will be extremely costly to implement.

Concluding remarks

Treaties involving disarmament and confidence-building measures provide a means for enhancing security, i.e. they are not goals in themselves. Such treaties provide concrete testimony to the fact that political tensions have been reduced, if not eliminated. As far as historical parallels are concerned, the Washington Treaties of 1921 provide the best example. The negotiations leading up to the treaties were initiated in an attempt to avoid a naval arms race

between Britain and the United States. The decision by Congress in 1916 to build a «navy second to none» challenged British naval hegemony and traditions dating back to the Battle of Trafalgar of 1805. Negotiations succeeded primarily because there were few political obstacles to an agreement. Other important factors, of course, were the economic and domestic political conditions in the countries concerned. Perhaps, if superpower relations continue on their positive path, present day conditions may prove to be not much different from what they were in the early 1920s.

Verification

It has already been stressed that Norway, because of the Soviet Union's military and political might, should not conduct bilateral negotiations with its neighbour in the east. The same principle applies to the question of verification. In an attempt to ensure that the CFE treaty will be adhered to, an elaborate verification machinery will be set up. Moreover, one may also safely assume that existing rules in the field of confidence- and security-building measures (CSBM) will soon be considerably strengthened.

Compared to the present situation, all these developments will no doubt increase our ability to monitor Soviet military activity in the Leningrad Military District and in the waters around Norway.

We assume that intelligence activities — including airborne radar surveillance (AWACS) activities — will continue as before, making it possible for areas of interest to be monitored. National technical means (intelligence) will not be addressed any further in this paper, however.

We suggested earlier in this study that the Soviet Union could implement reductions in the Leningrad Military District unilaterally while simultaneously accepting certain self-imposed restrictions on activities in the area. The Soviet Union could go even further by declaring that all such unilateral measures would be subject to verification under the provisions of a CFE-treaty. If this is accepted, it would only be natural that the proposals put forward here should be subject to international verification, though clearly with strong Norwegian participation.

Control measures: general remarks

In terms of concrete measures, those most relevant today include use of satellite imagery, overflights, and on-site inspection. The latter category should involve both visits and the permanent stationing of personnel in an area. Although there is a technical distinction to be drawn between the verification of a CFE treaty

and verification of the existing Stockholm agreement (CBMs), the distinction will not be addressed in this paper. In actual practice, all forms of inspection will be beneficial in terms of providing data irrespective of the framework of rules governing the inspection. Still, a CFE treaty must be verified in greater detail than, say, regular exercise activity.

Although satellites have so far not been formally associated with the verification of arms control treaties (except as part of national technical means), one may expect that in the future treaties will be designed with a view to allowing for more effective use of satellite surveillance. For example, one can envisage an arrangement whereby aircraft are displayed outside a hangar for counting at certain agreed hours. It would also be sensible for several countries to cooperate in the purchase of satellite pictures, as it would be extremely costly for all countries concerned to launch independent satellite programmes for the purpose of verification. Norway should avoid getting into a situation where it does not have access to raw data. As an independent party to a treaty, we cannot depend on the interpretation of satellite photos done by other national authorities. This is an area where we need to quickly build up our own body of competent analysts. It might also soon be possible for aircraft from one alliance to fly over the territory of another. This field of aerial surveillance is one where Norway should be able to make a significant contribution, given that we can draw on experience from a long tradition of aerial maritime surveillance.

Participation in observer groups and on-site inspection teams inside the Soviet Union is likely, over time, to become a drain on resources. Even so, we must not avoid responsibilities in this field. Norway, like any other NATO member, will have to accept inspection teams coming from the east and get used to the idea of having Soviet officers visiting our installations. Some Norwegian officials have expressed concern that verification activities be used for intelligence purposes. More specifically, there is Norwegian concern about the dangers of disclosing mobilisation depots, as this might increase the risk of them being attacked. Not too much importance should be attached to this type of concern. All the information derived from an established verification regime is liable to abuse. On balance, the advantages of early-warning out-

weigh the dangers alluded to above. It is also clear that greater demands for the security of mobilisation depots must be met by decentralisation and dispersal (which is a characteristic of our system of mobilisation), as well as by making special provisions for guarding depots against attack by SPETSNAZ forces.

More so than for other NATO countries, Norway will be keen to monitor activities on the Soviet side of the border. Whereas NATO countries on the Continent might soon find themselves separated from Soviet divisions by a *cordon sanitaire* in Eastern Europe, the vicinity of Norway will continue to be an area of considerable Soviet military activity. It is therefore particularly important for Norway to get involved at an early stage in the process of establishing a verification regime. In this way, Norway will be able to use its right of inspection to monitor activities in the Leningrad Military District in a manner beneficial to our security.

Naval forces

Naval forces — including amphibious units — are still not on the negotiating table, which means that it might not be possible to act upon the proposals put forward in this study within the framework of a CFE treaty. Nonetheless, there is no reason to exaggerate the extent to which this fact poses a serious problem. For example, the Soviet Union should allow its 63rd Naval Infantry Brigade to be treated as any other army unit. As far as surface combatants are concerned, these are all fairly large and not very numerous; i.e. it will be fairly easy to trace their movements and even to ascertain whether agreed reductions are being implemented. Submarines clearly fall within a special category. This is particularly true, of course, with respect to SSBNs as both superpowers are unlikely to accept a regime aimed at controlling the movement or deployment of their key retaliatory assets. The practical consequence of this is that treaty controls regulating the movements and dispositions of other categories of submarines are not likely to be accepted either. Again, this ought not to be seen as an unsurmountable problem. Insofar as one is dealing with large and expensive units with considerable striking power, the total number of units is still small from the point of view of verification. Moreover, the construction

period for each submarine is long (several years). This means that it will be virtually impossible to increase the number of submarines without being observed by the West. Clearly, submarines can be transferred from other fleets — e.g. from the Pacific Fleet. Yet these would either have to travel around the world or else transit the Bearing Strait, and a large number of submarines will not be able to pass undetected through this shallow strait.

As far as different types of mines are concerned, the total number held cannot be controlled without resort to on-site inspection. Since naval arms negotiations have not yet started, we must assume that for the next couple of years no formal access will be granted for the inspection of Soviet storage facilities for mines. Although, as suggested earlier, Norway should not initiate bilateral negotiations, it might still be possible for the Soviet Union to invite a «Western group of observers» to inspect the relevant storage sites.

Air forces

Combat aircraft and helicopters are already included in the CFE talks, and will therefore be affected by the verification procedures worked out in connection with that particular treaty. NATO does not wish to establish separate zones with sub-ceilings for these weapon systems. The reason for this is that the very mobility of air forces makes it difficult to tie them down to a specific region. As far as reductions and restrictions within the Leningrad Military District and on Kola are concerned, these can be verified in part by the provisions worked out under the CFE treaty, i.e. concerning on-site inspection and the exchange of satellite pictures. In addition to this, it should be remembered that in some ways aircraft fall into the same category as naval forces. Compared to the total number of tanks the number of aircraft is relatively small, and their movements are fairly easy to monitor with ordinary radar. The problem, of course, is that a squadron of combat aircraft may be east of the Urals in the morning and over Kola by noon on the same day. Despite this fact, we believe that there is a requirement for a sub-ceiling for combat aircraft particularly in the northern part of Leningrad Military District, and that it is possible to verify compliance with an agreement using national technical means.

Ground forces

The activities, composition, and size of ground forces can be fully covered by an international verification regime. Satellites, surveillance aircraft, and on-site inspection should be able to provide a sufficient measure of control. Hence, there is every reason to believe that the additional cuts and restrictions proposed in this study can be verified as part of a larger CFE treaty in Europe.

Conclusions

By way of conclusion, we have argued that the self-imposed restrictions and the unilateral reductions which we have suggested the Soviet Union should carry out in the north — in order to demonstrate that they have no offensive ambitions in the area — can be verified as part of a CFE treaty or with complementary means. There is little reason, therefore, for the Soviet Union to postpone the implementation of the measures proposed in this study. In any event, Norway is clearly in a position to determine whether accepted proposals are adhered to or not.

Conclusions

This study is intended to serve as a «yardstick» with which to measure the military value of arms control proposals from the Soviet Union in the North. We have established that the Soviet Union does have some legitimate or 'minimum' strategic interests on the Kola peninsula. Geographic factors compel the Soviet Union to deploy a large part of its strategic submarine force in Northern Waters. Similarly, the area north and west of Kola is extremely important for the Soviet Union as far as early-warning against long-range bombers, cruise missiles and ICBMs are concerned. Thus, the validity of Soviet force deployments *per se* is not being questioned. What we are questioning, however, is the *type* and the *size* of these deployments. Given that the weapon systems thought to constitute a threat against the Kola peninsula are either aircraft or missiles, this in itself should provide an indication as to the requirements for Soviet forces in the region.

Bearing these considerations in mind, it would clearly be unreasonable to propose significant Soviet reductions in the number of, say, ground-based air defence systems and air defence fighters. The need for the Soviet Union to provide adequate protection for its SSBN force must also be accepted as a consideration guiding arms control proposals for the region. On the other hand, it is quite evident that, having embraced a defensive military doctrine, there is no rationale for the Soviet Union to maintain the existing number of attack submarines and long-range maritime bombers. Both these weapon systems constitute a major threat to the Atlantic SLOCs. Moreover, it would also appear that naval infantry and army units do not provide any form of protection against the kind of threat facing Kola. In the North, the importance of these ground forces derive from their capacity to seize and hold territory, which in turn suggests their link to offensive operations. Still, we have not recommended a complete phasing out or removal of these units, as

we recognize that there might be some need for local security forces to protect against raids and sabotage, and/or for territorial defence.

By way of conclusion, we shall briefly summarise some of the important factors that need to be born in mind in order to properly assess the military significance of different types of reductions.

As far as military aircraft are concerned, the types of aircraft involved must be established, as well as their primary mission and, above all, their ages. If the issue at stake is merely the removal of, say, a certain number of older air defence fighters, then the impact of this will be negligible as far as the offensive capacity of the Soviet Union is concerned. If, on the other hand, discussions involve such aircraft as long-range maritime bombers of the type Tu-24 Backfire or fighter bombers (e.g. Su-24 Fencer), then this can be interpreted as a Soviet desire to reduce offensive capabilities in the far North.

As for naval forces, similar principles apply. If the Soviet Union were to remove three Romeo-class submarines from the Northern Fleet, this would only represent a phasing out of older models (something practiced by most nations irrespective of whether or not disarmament is taking place). It would be quite a different matter, however, if three Victor III-class submarines are retired. In the latter case, the threat to Allied SLOCs would, objectively speaking, be reduced.

As far as ground force reductions are concerned, the key to any appreciation of their potential value depends on their actual location, i.e. will reductions affect forces on Kola or in the southern part of Leningrad Military District? If one is talking about personnel categories, it is important to distinguish between i.e. ordinary conscripted work companies and air assault units. A reduction in the number of work companies will not affect the capacity for offensive operations. Removing the air assault brigade will provide unambiguous evidence of more limited offensive ambitions. As far as army equipment is concerned, it is important to consider such factors as the age and type of the equipment being pulled out. One also needs to establish whether or not equipment is withdrawn from storage sites or from Category A units. One must also address the issue of what will happen with equipment that has been pulled out. Will it be destroyed or merely stored? If the latter is the case, the question naturally arises as to where it will be stored.

In this study, we have attempted to establish what may be said to constitute a 'reasonable' level of Soviet forces in the vicinity of Norway. This has been done on the basis of certain assumptions about Western threats to the region. Having done this, we have examined in some detail the sort of measures thought most likely to enhance Norwegian security. We have analysed and proposed reductions in the number of units deemed unsuitable for the defence of Kola. These units and weapon systems are, by and large, identical to those that would have to be used in offensive operations launched against Norwegian territory. *Reducing these units should not adversely affect the Soviet Union's ability to defend this area.* The greater the number of offensive force components removed from the region, the greater will be the extent to which the Soviet force structure reflects alleged defensive purposes. The proposed reduction — if implemented — will serve as a clear signal to the outside world that the Soviet Union is serious about restructuring its forces in accordance with the notions of 'defensive defense' and 'reasonable sufficiency.' It should therefore be in the Soviet Union's own interest to follow up on our proposals, since this would create a greater degree of convergence between declared defensive intent and existing force structures.

We have not proposed reductions in Norwegian military forces. We foresee, however, that restructuring of Soviet forces in line with our proposals may justify some reductions in the readiness of Norwegian forces as well.

Notes:

1. Tomas Ries, *Strategic Implications of Unmanned Aircraft for the Nordic Region*, (Norwegian Institute for Defence Studies, April 1990).
2. Statement by General of the Army, M. Moiseyev during his visit to Finland, 13 February 1990.
3. Agreement between Norway and the USSR for the prevention of incidents at sea and in the air outside territorial waters. The agreement is not yet ratified.
4. It must be stressed here that one is concerned about a *local concentration* of forces. Such a capacity to concentrate forces and break through enemy lines does not therefore depend on the ratio of forces between defender and attacker along the entire front. Success may be achieved with a less favourable ratio.
5. If the number of SSBNs becomes sufficiently small, it might be difficult to argue against the assertion that the deployment of sea-to-land SCLMs on a greater number of submarines will strengthen the second-strike capability, thus improving crisis stability. It must be a puzzling thought, that too large a reduction in the number of SSBNs will reduce crisis stability and thus encourage the deployment of other weapons systems (e.g. SLCM platforms) in order to maintain stability. If this line of reasoning is correct, it would appear that one is engaging in reductions for the sake of reductions, and not in an attempt to enhance stability. The paradox is linked to the fact that the idea of a 'secure' second-strike capability in itself reflects recognition of and adherence to the concept of Mutual Assured Destruction.
6. Andrei Kortunov and Igor Malashenko, «Tbilisi, Riga og resten?» *Norsk Militært Tidsskrift*. (No. 2, 1990), pp. 21-25.
7. Since we have treated the new Soviet defensive doctrine seriously, we have, unlike Admiral Gorshkov, not paid much attention to Soviet peacetime requirements. This would also appear to be in accord with Soviet statements over the past couple of years to the effect that out-of-area operations are being scaled down. Most likely, the Soviet Union will now emphasise non-military instruments of influence in these areas.
8. The origins of the «Bratteli doctrine» go back to 1975 when the Norwegian prime minister declared: «Our assumption when foreign warships make port visits has been and is still that nuclear weapons are not carried on board». Norway's NATO allies are expected to respect the Norwegian position. Because of the U.S. principle of neither confirming nor denying the presence of nuclear weapons on board a warship, the Norwegian government has refrained from insisting on an explicit American declaration to this effect. In the wake of the New

Zealand controversy and subsequent initiatives by Denmark, the debate about the contents of the Bratteli doctrine resurfaced in Norway. The government, however, chose to stick to the existing interpretation.

9. For a more thorough treatment of the subject, see Håskén, Kjølberg, Lütken, Omang and Solstrand, «Confidence Building Measures at Sea» *FFI/RAPPORT-88/5002*.
10. Superpower accords, including the regulation of sanctuaries for SLBMs, and subsequently the monitoring of such an arrangement, would require extensive cooperation between the two principal powers. Whereas this might serve U.S. interests, it might on the other hand translate into claims for preferential rights in the ocean areas in question, which in turn might cast political shadows on the shores of the littoral states whose security and sovereignty would become entangled with the management of the central nuclear balance. (See J.J. Holst, «The Arctic, Northern Waters and Arms Control» *The Third Oslo International Symposium, The High North 2010*, June 1989).

Soviet 'reasonable sufficiency' and Norwegian security

In Vienna, March 9, 1989 both NATO and the Warsaw Pact tabled their proposals for the implementation of conventional force reductions in Europe. The common objective of the negotiations is to enhance military stability in Europe from the Atlantic to the Urals.

Although Northern Europe, including Norway and its adjacent territory, has been dealt with, this has only been done in a peripheral and indirect way. In particular, the disarmament talks have not addressed the peculiarities of the situation in Northern Europe — peculiarities that derive from a particular configuration of opposing forces in this part of Europe. The object of this study is to examine what sort of disarmament and confidence-building measures need to be implemented in the North in order to maximize regional stability in general and, more specifically, to reduce the offensive potential of Soviet forces in particular.



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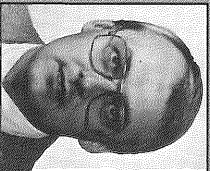
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Arne B. Dahlvang



Roald Gjelsten



Rolf Tønnes