Security in uncertain times

The Military Advice of the Chief of Defence 2023
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Foreword by the Chief of Defence

The Norwegian Armed Forces must be further strengthened.

We must continuously adapt to changing surroundings and technological developments. Planning for the development of our Armed Forces must have a long-term perspective. At the same time the long-term plan for the Defence Sector must be sufficiently flexible to take account of changes in our surroundings.

The Norwegian Armed Forces have been changing over time. Our military structure holds high standards, but has limited volume and thereby limited endurance. We conduct operations at home and abroad continuously. Our experiences from operations and ongoing reforms the last decade means that the Norwegian Armed Forces are well place for further growth.

This Military Advice is holistic, but it does not provide all the answers. I have deliberately chosen to set a course by recommending five focus areas for the future development of the Armed Forces. Through the focus areas, I aim to enhance the Armed Forces’ combat endurance and ability to tackle challenging situations. Initially, the measures will focus on eliminating known weaknesses in the existing structure. In addition, we need to strengthen the Armed Forces’ ability to operate in the maritime domain and protect both military and civilian targets against air threats. The fourth focus area aims to enhance the ability of the Armed Forces to engage targets at long range. In the final focus area, I present proposals to additionally improve the combat endurance of the Armed Forces through further increases in the Armed Forces’ volume.

The last Military Advice was submitted in 2019. Significant changes have taken place since then. We have been through a pandemic. We have pulled out of Afghanistan after operating there for almost 20 years. We have witnessed a full-scale attack on Ukraine by Russia. Finland has joined NATO and Sweden is also set to become a member. The effects of climate change are accelerating, and an arms race is once again under way between major powers such as the USA, China and Russia. The challenges in the Middle East and the Sahel region of Africa are also considerable. In Norway, cross-sectoral security challenges have been attracting greater attention, and it is apparent that the distinction between societal security and state security is becoming blurred.

As I am publishing the Military Advice, the Norwegian Defence Commission and the Total Preparedness Commission will also give their recommendations. I will continue to provide military advice in the work towards the next long-term plan for the defence sector. Our politicians will have to make both short and long-term choices and priorities based on all the information that is now being presented to them.

I look forward to further discussions, but would nevertheless like to state that it is absolutely essential to establish clear priorities at an early stage. The Armed Forces must be further strengthened and the strengthening needs to happen fast. The Armed Forces are both well positioned and more than ready for further development and growth – for our common security.

Thank you to everyone who has contributed to the preparation of this military advice. Comprehensive high-quality inputs have been received. For my part, it has been important that the main lines of the advice have the broadest possible support among the Armed Forces leadership, across branches and domains, among the employee organisations and among other government agencies within the sector.

Eirik Kristoffersen
General
Chief of Defence
The task

Chapter 1

The mandate

For use as a basis in the work on a new long-term plan for the defence sector, the Norwegian Government asked the Chief of Defence to submit Military Advice by 31 May 2023. The Government tasked the Chief of Defence with assessing recommendations on scalable measures and priorities that address the following development paths:

- A development path with a level of funding that is lower than assumed in the current long-term plan.
- A development path that is based on the current long-term plan and associated financial planning framework, including the Storting’s resolution and associated financial consequences (cf. Prop 14S (2020-2021) and Inst. 87S (2020-2021)).
- A development path which, in light of a deteriorating security policy situation, recommends prioritised measures for the further scalable strengthening of the defence sector in both the short and longer term. The Chief of Defence is asked to present different levels of strengthening over and above the current economic trajectory.

In addition, the Chief of Defence’s recommendations should be based around the following objectives as a basis for the further development of the country’s defence capabilities:

- Ability to maintain continuous situational awareness in Norwegian areas of interest, with a particular emphasis on the High North.
- Counter conflict by contributing to credible deterrence and reassurance based around integrated cooperation with Norway’s allies.
- Over time, be able to conduct joint operations in crises and wars in an allied framework to defend Norway and its allies.
- Strengthen Norwegian and Nordic defence capabilities.
The Military Advice was drawn up in accordance with national regulations. During the work, a number of supplementary studies were carried out in selected areas in accordance with the mandate given to the Chief of Defence by the Government. The Norwegian Defence Research Establishment, the Norwegian Defence Estates Agency and the Norwegian Defence Materiel Agency have provided input, and a dialogue has taken place with the Norwegian Defence Commission and the Total Preparedness Commission. Aspects of the Norwegian Defence Research Establishment’s Defence Analysis, published in March 2023, were also taken into account in the advice, and a dialogue has taken place with the working group for the development of the Norwegian National Security Authority’s security advice. Employee organisations and a group of cadets at the Armed Forces’ military academies also provided input.

The Military Advice is divided into three main parts:

Part 1 Context describes the Chief of Defence’s assessment of factors relating to military strategic developments, as well as overall trends within society that are of significance to the development of the Armed Forces.

Part 2 The Norwegian Armed Forces describes the function of the Armed Forces, and presents an account of the Armed Forces’ status and challenges.

Part 3 The Chief of Defence’s Military Advice constitutes the Chief of Defence’s expert military advice.

This document is a translation of the Norwegian Military Advice. The Military Advice is underpinned by a set of classified supplementing studies which, among other things, set out capabilities with regard to numbers and the need for personnel, training and exercises, materiel, real estate and infrastructure, ammunition and fuel.
Chapter 2

An altered security situation
Russia represents the foremost threat to Norway and Norwegian interests. The attack on Ukraine is a watershed moment. Russia has launched a full-scale war against one of its neighbours, showing that it is willing to use extensive and illegal military force in order to achieve its goals. European security, the international legal system and our democratic values are under threat, and the likelihood of conflict involving Norway has increased. Efforts to develop defence capabilities must take into account the fact that the security situation has changed considerably. Rapid response is needed in many areas.

The confrontation between the major powers will be protracted
Rivalries between democracies and authoritarian regimes are increasingly characterised by the use of force, ideological lines of conflict and bloc formations. The war in Ukraine forms part of this picture, and the consequences of the war will linger long after hostilities have ended. China’s support for Russia is problematic. The joint attempt of the two countries to change the rules-based international order challenges our values and interests.

Russia has demonstrated its disregard for the international norms and legal principles on which Norway as a small state depends. At the same time, the USA’s orientation towards Asia means that it is increasingly expecting European states to safeguard their own security. In addition to enhanced Norwegian defence capabilities, alliance affiliation and binding cooperation with allies and other partners will be absolutely crucial for Norway’s security policy.

Greater strategic importance
The geostrategic importance of the High North and the Arctic has increased, and today our allies have a more extensive and active presence in the northern region than before. It is vital that the Norwegian Armed Forces are able to shape, coordinate and participate in allied operations.
As a maritime nation, Norway has global interests across a broad spectrum of maritime activities. Norway is also a significant player in fields that are of strategic interest to other states, for example as an energy supplier to Europe. The Nordstream incident has highlighted not only the vulnerability of subsea infrastructure, but also the importance of having the capability to protect critical maritime infrastructure. Norway’s freedom of action and security depend on maintaining and respecting international conventions and customs with regard to the ocean and marine resources, including unrestricted access to the ocean as a transport route. The importance of international frameworks and rules is reinforced by the fact that climate change is making the Arctic increasingly accessible to civilian and military activity. Developments in our close areas of interest will require more of Norway in order to maintain both influence and situational awareness. The ability to maintain a presence and exercise authority simultaneously across extensive regions is becoming increasingly important.

The importance of NATO
The membership in NATO forms the cornerstone of Norway’s defence and deterrence efforts. Norway must continue to contribute to the overall defence capabilities of the Alliance. The Armed Forces must provide capacity and contribute both at home and abroad. NATO’s further development of plans and the command structure will enhance the collective capability and require greater contributions in the form of both forces and resources from member states. The defence of Norway is strengthened when both Norway and its allies demonstrate willingness and ability to contribute to security in our neighbouring regions through presence, exercises and training. Strengthening NATO’s collective capability will raise expectations to Norway regarding contributions to the Alliance, both regionally and across NATO’s entire area of responsibility. The bilateral cooperation with close allies will also become more important.

New Nordic dynamics
Finnish and Swedish NATO membership will have a positive impact on the security of the Alliance in the High North and the Baltic Sea region. The enlargement will strengthen NATO’s deterrence and collective defence capability in our part of Europe. While the membership paves the way for a significant expansion of Nordic defence and security co-operation, the Nordic countries to a certain degree face different military strategic issues in certain regions. In the longer term, Russia will strengthen its military footprint in both the north and the west, but in the shorter term, it is uncertain how Russia’s activity will be affected by the Nordic enlargement.

Norway’s importance as a reception area for allied reinforcements for the Nordic region will increase. Allied reinforcements will no longer only seek to reinforce Norway; they will also pass through Norway on their way to Sweden and Finland. Facilitating an allied presence and the reception of reinforcements in Norway will offer greater security and defence capabilities nationally, among the Nordic countries and for the Alliance as a whole.

Russia – worrying developments
Russia is facing an inevitable power and generational change. Developments may move in several directions, including greater internal unrest and instability. Norway is increasingly being seen as part of a Western and aggressive collective, and to a lesser extent as a neighbouring country whose interests align with those of Russia.

The need for strategic dominance in the Arctic is pivotal to Russian defence thinking, and over the course of the next decade, Russia may abandon its ambition of low tension within our neighbouring regions. As a result of the war in Ukraine, Russian vulnerability has increased. Rus-
The geostrategic position of Norway and the Nordic countries
The situation

Russia will learn important lessons from Ukraine. Principles such as surprise, depth and rapid movement will continue to form the basis for the further development of Russian military power. Any Russian attack on Norway would probably seek to engage military and socially critical targets throughout the country in an attempt to weaken both our will to resist and our military capability. Long-range precision weapons will constitute the central component of such a strategy.

The war in Ukraine has shown that nothing is off limits in the Russian way of warfare. This places great demands on the ability of Norway and our allies to secure and defend fundamental national functions, including critical military and civilian infrastructure.

China is challenging the West. Russia’s intention to weaken the USA and Western influence is shared by China. The collaboration between China and Russia will grow ever closer, which China considers advantageous for its interests and influence, including in the Arctic. Russia is becoming increasingly dependent on China as a result of the war and Western sanctions. In the long term, Russia may be forced to make concessions to China in the High North as well. China is seeking to control strategic infrastructure, resources and value chains. China is also developing capabilities that will impact on the ability of NATO countries to exploit space and cyber capabilities for communications, navigation, surveillance and operation of critical systems. In our neighbouring regions, Chinese activity has so far primarily been linked to research and commercial interests, as well as activity in both space and cyberspace, but this situation may change.

A serious situation

In summary, Norway finds itself in a serious security situation. Russia appears to be an unstable and unpredictable actor, and there are few signs of any change in political direction. Norway must contribute to stability and predictability in our neighbouring regions, and be prepared to take greater responsibility for our own security and contributions to the Alliance.

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and unpredictable actor, and there are few signs of any change in political direction. Norway must contribute to stability and predictability in our neighbouring regions, and be prepared to take greater responsibility for our own security and contributions to the Alliance. The likelihood of direct conflict and war on Norwegian soil or that of our allies has increased. The Chief of Defence therefore believes that Norway must strengthen its defence capabilities, both nationally and within the framework of NATO.

Sustainable Development Goals

The UN Sustainable Development Goals, operationalised through the White Paper (Meld. St. 40 (2020–2021)) Objectives with meaning – Norway’s action plan to reach the Sustainable Development Goals by 2030, provides a framework that the Armed Forces must take account of. The Armed Forces must operate in a sustainable manner and align themselves with the UN Sustainable Development Goals. Four main dimensions within the UN Sustainable Development Goals are of particular importance as regards our defence: Climate and environment, peace and security, economics and social conditions.

Climate change poses a serious threat to the international community, and the Armed Forces must be prepared for the introduction of stricter environmental requirements. A changed climate will affect both the threat picture and, as a result, the Armed Forces’ operations. In addition, the development is placing demands on the Armed Forces’ own carbon footprint, through both procurement and operations. Climate change is a global problem that is leading to scarcity of resources, more frequent natural disasters, rising tensions and new migrant flows. The Armed Forces must be ready to assist civil society with resources in order to deal with more extreme weather events, such as floods, forest fires and landslides. Climate change will affect the regions within which the Armed Forces operate. In the Arctic, for example, melting ice could lead to increased maritime activity and make the region more accessible as an arena for both cooperation and competition between states.

In order to meet the requirement for emission reductions and environmental protection, the defence sector has drawn up a climate and environmental strategy, as well as an action plan for climate and environment covering the period 2023–2030. Among other things, the action plan for climate and environment sets out which measures can be implemented and when, and stipulates the cost of the measures as well as the estimated impact.

The UN Sustainable Development Goals for peace and security impact on the Armed Forces. The Armed Forces contribute to this work by participating in international operations both within and outside the framework of the UN. More armed conflicts both internally and between states may increase the need to use the Armed Forces outside Norway in order to promote global peace and security.

As both a contractor and a buyer, the Armed Forces have a particular responsibility to emphasise ethical and prudent processes, including development with a focus on economic sustainability. The circular economy and reuse of resources will be important if Norway is to achieve its climate and environmental goals and the UN Sustainable Development Goals. The defence sector must be acutely aware of the sustainability requirements in connection with the procurement, operation and disposal of materiel, real estate and infrastructure. Through future investments, the Armed Forces must prepare materiel, real estate and infrastructure to take advantage of new climate-friendly technological solutions over their lifetime. This will require flexible solutions emphasizing development potential over the course of their life cycle. The Armed Forces must also make use of the technological advances that may come about as a result of
the efforts being made to counteract climate change, both in order to create advantages in operational effect and to facilitate the fulfilment of future requirements and changes, such as new energy sources.

The societal component of sustainable development means that the Armed Forces must be inclusive, reflect diversity within society and facilitate a safe working environment. The Armed Forces must look after their employees. The societal aspect of sustainable development also deals with combating social dumping and other censurable actions on the part of external suppliers.

The market situation
The defence sector is affected by many of the same trends as society as a whole. For a while, the coronavirus pandemic contributed to longer delivery times for raw materials and materiel. The defence market is characterised by complex supply chains that depend on predictability and reliability in order to deliver.

Challenges relating to longer lead times and higher costs as a result of the pandemic have been magnified by the war in Ukraine. Both Ukraine and Russia are major suppliers of many of the raw materials and metals necessary to produce components of modern systems. Higher energy prices are also contributing to higher prices for goods the defence sector needs. Price fluctuations and delivery challenges lead to shorter deadlines from industry, which in turn reduces the time available for in-house decision-making processes. In turn, this constitutes a greater financial risk for the Armed Forces than has previously been the case.

These developments have created challenges for our ability to rapidly procure materiel and ammunition. The challenging market situation is exacerbated by the fact that most NATO countries are investing in more armaments at the same time. The industry supply chain is unable to respond sufficiently rapidly to the increase in demand. Relatively low production levels over time, particularly due to a limited focus on contingency stocks both nationally and among Norway’s allies, amplify these challenges. Production capacity will depend on the ability of the industry to scale up fast enough, which depends on a sufficient financial baseline. The Armed Forces must plan for longer delivery times.

Technological developments
A modern and technologically up-to-date fighting force is crucial for operations, as well as the day-to-day running of the force.

Technological advances happen at a rapid pace and may result in materiel and weapons systems losing their operational relevance if they are not continuously updated. At the same time, the development of emerging and disruptive technologies is increasingly being driven by the civilian sector, such as machine learning, artificial intelligence, autonomy and big data. Increasing dependence on digital services and infrastructure is also contributing to greater vulnerabilities and creating new threats.

Space-based sensors and communications infrastructure, long-range precision weapons, network-enabled weapons and unmanned systems will all give military forces greater precision and range. Network solutions that link sensors, weapons and decision-makers instantly will make it easier to find and engage targets at long range and help increase the pace of operations. The technological prerequisites for this have been there for a while already, but the Armed Forces have so far been unable to make full use of these opportunities.

Advances in machine learning and artificial intelligence are facilitating automation of different processes, which in turn can contribute to more efficient decision-making. Quantum technology will eventually be able to offer more secure communications and better sensors. Devel-
Developments within the electromagnetic field also point to more efficient systems for electronic warfare and high-energy weapons.

We largely know what the Armed Forces’ principal materiel will be over the next 10–20 years. The Armed Forces must be able to integrate new technology in stages by adopting it as it matures. When appropriate, new and disruptive technology must be introduced to replace traditional solutions. Technological development for purely military purposes will remain important, but the Armed Forces must make use of technology and innovations fostered by the civilian sector. Cooperation with civilian industry is thus a key.

These technological advances will impact how the Armed Forces operates in crisis or war, as well as and manage its organization on a daily basis. Additionally, they will shape how the defence sector interacts and is organised. Modern military forces are entirely dependent on digital technology, and the effective application of information and communications technology (ICT) will be one of the paramount drivers of enhanced operational capability and management the coming years.

Technology development will have consequences for the needs of the Armed Forces with regards to skills and expertise in the future. Armed Forces personnel must continually develop their skills and learn in new ways. This competence-building must be in step with technological developments and altered operational concepts.

**Economy**

Striking a balance between tasks, structure and funding is a fundamental premise for the use, maintenance and development of defence capabilities. Balance means that the existing structure and associated operational requirements and tasks are funded in accordance with the existing level of ambition. The development of defence capabilities must be planned and funded holistically within both investments and operations, and must take into account future needs regarding personnel, real estate and infrastructure, materiel, etc.

Inadequate funding relative to the tasks of the Armed Forces and the size of the existing structure has long been a challenge. Insufficient flexibility in the governance of the defence sector has meant that funding, tasks and structure have not changed sufficiently rapidly in step with changing assumptions. The consequence is an imbalance which results in either a reduced ability to carry out tasks in a short-term perspective or fewer opportunities for development in a longer-term perspective, or a combination of these two scenarios. Correcting any imbalance can also be disproportionately expensive because decisions about changes may be made too late.
Part II

The Norwegian Armed Forces

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Chapter 3

The role of the Norwegian Armed Forces today and in the future

Through the long-term plan, the Storting has defined nine tasks for the Armed Forces along with associated levels of ambition. Seven of these tasks are dimensioning and, together with developments in the security situation, act as guidelines for the organisation and development of the Armed Forces.

The Armed Forces shall protect Norway’s population, territory, independence and sovereignty against external threats. The threat is constantly evolving, which means that the requirements imposed on the structure and organisation of the Armed Forces change over time. The Armed Forces must have a long-term focus that is adapted to a changing environment, with the flexibility to adapt continuously in step with developments.

The Norwegian defence concept constitutes a holistic approach to the defence of the country. This defence concept describes how the defence of Norway is based around three parallel main lines: The national defence capability, the collective defence within NATO and bilateral cooperation with close allies. The defence concept is underpinned by a modern and prepared total defence system which contributes to resilience and combat endurance against traditional and hybrid threats.

A strong national defence which complies with NATO’s Article III helps Norway to maintain an influence over its own security and freedom of action. The national capability is also a prerequisite for the ability of the Armed Forces to face up to the challenges at hand. At the same time, support from allied forces within the framework of NATO’s Article V is a key part of Norway’s deterrence and defence capabilities, which in turn places demands on Norway’s ability to receive and support allied reinforcements. Similarly, the Armed Forces must be able to make forces available for an allied defensive response to an armed attack under NATO’s Article V, both within and outside Norway, in order to contribute to NATO’s collective defence. In addition to its
The role of the Armed Forces

The Norwegian Armed Forces must be prepared to contribute to international crisis management within multinational frameworks such as coalitions or under the auspices of the UN.

It is the link between the three main aspects of the defence concept that constitutes Norway’s overall deterrence and defence capability. The structure of the Armed Forces must have a volume and a composition that enable them to carry out training, exercises and domestic operations, and to receive and integrate with allied forces, while at the same time contributing to operations outside Norway. However, it is also vital that the Armed Forces are available to contribute to society’s management of major incidents and accidents as and when necessary.

The structure of the Armed Forces must possess the necessary firepower, mobility and combat endurance to facilitate sufficient flexibility and an ability to face up to both current and future security challenges.

Continuous situational awareness is a prerequisite if the Armed Forces are to be able to respond to developing situations appropriately. Rising tensions in our neighbouring regions are increasing the importance of the Armed Forces having an independent intelligence capability in order to establish and maintain situational awareness, both on their own behalf and in support of NATO. The Intelligence service has a particularly important role to play and is responsible for providing situational awareness and decision-making support to military and civilian Norwegian authorities and our allies.

The Armed Forces must operate jointly, which means that the contributions of forces in all domains must be coordinated in order to create challenges for the adversary. These operations are led by a Joint Headquarters which is capable of planning and leading operations across the Armed Forces branches, domains and levels. Joint operations are constantly evolving. A more complex threat landscape is placing greater demands on holistic approaches and coordination across domains and sectors. Modern technology, especially within the areas of weapons, sensors and information technology, is creating great potential for close cooperation. These developments form the basis for new conceptual directions, such as NATO’s concept of multi-domain operations. Although multi-domain operations still revolve around planning, managing and executing joint operations, the concept helps to exploit the potential of modern technology and cooperation in a more efficient way. The Armed Forces must therefore closely monitor developments within new technology, particularly within the areas of satellite technology, network technology and the processing of large amounts of data, in order to ensure a high tempo of operations and provide a sound basis for decision-making by the political authorities and the Armed Forces in the future.

Cyber defence and space activities are becoming increasingly important for the ability of the Armed Forces to contribute to joint operations. The country’s cyber defences must maintain, operate and protect the Armed Forces’ information and communication systems against digital threats. In the space domain, space activities must maintain and strengthen capabilities as regards communication and navigation throughout the Armed Forces’ area of operation, and contribute to the monitoring of Norwegian areas of interest.

The Armed Forces must have a continuous presence in prioritized areas to contribute to deterrence, situational awareness, the ability to assert Norwegian sovereignty and the ability to exercise national authority. In the land domain, the Armed Forces must have a presence with a focus on the High North, surveillance of the Norwegian-Russian border, and the King’s Guard (HMKG) in Oslo. Through the Home Guard, the Armed Forces must have a presence throughout the country and ensure local knowledge and interaction with the civilian sector. The Armed Forces must therefore closely monitor developments within new technology, particularly within the areas of satellite technology, network technology and the processing of large amounts of data, in order to ensure a high tempo of operations and provide a sound basis for decision-making by the political authorities and the Armed Forces in the future.
Forces must also ensure preparedness for counterterrorism and crisis management. The ability to operate in the maritime domain is particularly important to ensure presence and situational awareness in Norway’s major maritime areas of interest. The Armed Forces must have a presence and enforce jurisdiction and sovereignty in territorial waters, economic zones and maritime areas of interest. In addition, the Armed Forces must monitor and patrol Norwegian and international airspace and maritime areas of interest, as well as maintain combat aircraft readiness on behalf of NATO.

The Armed Forces have many resources at their disposal that can and should support civil society in challenging situations such as major incidents, accidents or disasters, both in Norway and abroad. This support requires close cooperation between the Armed Forces and the civilian emergency preparedness sector within the framework of the country’s total defence system. The increasing use of complex instruments is also placing stricter demands on cooperation.

Ensuring that our Allies are able to operate together with Norwegian forces in a challenging Arctic climate and geography is a prerequisite for the Norwegian defence concept. The Armed Forces must therefore regularly host training and exercises with allied forces in Norway. Military activity together with our allies demonstrates both a desire and an ability to stand together, and helps to make Norwegian deterrence and NATO’s new defence concept credible.

In recent years, Norwegian Armed Forces units have regularly taken part in allied operations in the High North. Participation puts us in a position to influence allied operational patterns in a direction that is consistent with Norwegian security policy and interests. In addition, participation ensures that Norway is seen as a responsible actor that is serious about its security interests in the region.

The Armed Forces must be able to execute high-intensity combat operations both on their own and together with Allies at short notice. The Armed Forces must be able to draw allied forces into a Norwegian defensive response to an armed attack without delay and have the capability to fight closely and jointly with these forces from the outset. The Armed Forces must make provision for allied reinforcements to reach Norway rapidly and support the transportation of these forces to the relevant area of operation, regardless of whether this is in Norway or one of our neighbouring countries. In addition to receiving and supporting allied forces, this involves securing sea lines of communication, reception areas, ports, air bases and transport axes. In some areas, however, the Armed Forces must be prepared to fight without significant allied involvement over a period of time, which places demands on the responsiveness, volume and combat endurance of the structure.

In a war against an adversary that is increasingly employing both offensive and defensive weapons systems with long range and high precision, the Armed Forces, either alone or together with allies, must have the capability to attack the adversary’s military capabilities and critical vulnerabilities with long-range fire from land, sea and air. This development entails stricter requirements regarding the management of joint operations, the effect of which will depend on timely and precise information gathering, the seamless sharing of information and rapid decision-making at all levels, both nationally and in an allied framework.

The Armed Forces must have the capability to defend against attacks on both military and civilian targets. In addition to long-range missiles, attacks can come in the form of sabotage, unmanned systems or cyber-attacks. The Armed Forces must also be able to handle the complex use of instruments by the adversary, including attempts to exert influence. Society is particularly vulnerable to attacks using long-range missiles. The Armed Forces must therefore give priority to ensuring sufficient capability to protect key mili-
The role of the Armed Forces

The Armed Forces must utilise society’s collective resources in the defence of Norway, and the key to this lies in the total defence concept. Contributions from the total defence system are crucial for performing many of the Armed Forces’ tasks, such as receiving allied forces and logistics. In order to strengthen Norway’s defence capabilities, combat endurance and resilience, instruments from different areas of society must be coordinated seamlessly.

The Armed Forces must have the capability to take part in multinational crisis management operations within the framework of NATO or other multinational frameworks. Contributions to NATO’s standing forces, operations abroad and international efforts help to promote Norway as a relevant partner and strengthen the cohesion of the Alliance.

In summary, the Armed Forces must be aligned with the Alliance and sufficiently flexible to adapt to changes in the security situation and society at large. In addition, the Armed Forces must be modern, relevant and have the confidence of the Norwegian population. Tasks, structure and finances must be balanced. The Armed Forces must have a balanced ability to detect threats and defend the country and Alliance members in a joint operational framework against threats in all domains.
Chapter 4

The status and challenges of the Norwegian Armed Forces

The Armed Forces have significant operational weaknesses, which challenges their ability to face the security situation and handle the most challenging situations that the Armed Forces may encounter.

The early 1990s saw the start of the gradual reduction of the Armed Forces. This downsizing was a consequence of changes in the security situation after the Cold War and the prevailing budgets. The Armed Forces’ inventories, operational structures and maintenance capacity were downgraded or terminated. NATO operations in the Balkans and later in Afghanistan influenced the Armed Forces’ focus and use of resources. Although the operations provided important operational experience, they led to the Armed Forces being oriented towards a structure that afforded less focus on national capability than had previously been the case. This focus has considerably reduced the ability of the Armed Forces to defend Norway.

Following Russia’s invasions of Georgia in 2008 and Ukraine in 2014, this trend reversed and a gradual process of rebuilding began. Previous and current long-term plans are ambitious and pull the Armed Forces in the right direction in many areas. Overall, however, the plans have accepted too much risk in implementation. As a consequence, an imbalance has arisen between funding, tasks and structure. Collectively, the challenges mean that today’s Armed Forces are not sufficiently funded or dimensioned to perform the tasks incumbent on them.

Norway have donated large quantities of materiel and ammunition to Ukraine. These donations are also important for Norwegian security, and the Armed Forces will contribute for as long as needed. At the same time, the donations exacerbate the emerging imbalance, and it is difficult to predict the extent of support that will have to be provided to Ukraine in the future. This Military Advice therefore does not consider the donations specifically, but assumes that the materiel and ammunition donated by the
Armed Forces will be reacquired and replaced. However, reacquisition will pull resources from the entire defence sector, simultaneously as the Armed Forces must be strengthened and developed further.

The analysis process behind this Military Advice indicates that the current long-term plan represents a good starting point for further development of the Armed Forces. Despite many challenges, there is a lot that works well and our personnel carry out missions every single day. For example, the Armed Forces contribute presence, situational awareness and security through combat aircraft readiness for NATO, participation in allied naval forces and border security. The Norwegian Armed Forces have demonstrated an excellent ability to plan, lead and carry out major national and allied exercises with our allied partners. At the same time, the Armed Forces have repeatedly demonstrated an ability to rapidly turn their hand to the performance of unexpected and important tasks, e.g. through donations to Ukraine, the withdrawal from Kabul and the border security provided by the Home Guard during the pandemic. The Armed Forces are also investing in and phasing in modern materiel, such as combat aircraft, maritime patrol aircraft and helicopters, ocean-going coastal vessels and submarines. In addition, the special-forces are being strengthened. The build-up of the Finnmark Land Command and the mechanization of Brigade North is continuing with the introduction of air defence capability, long-range precision fire and new combat vehicles.

Despite these initiatives, the Armed Forces have a number of key shortcomings. The greatest challenges are linked to the protection of military and civilian targets against air threats, the ability to engage targets at long range, and maintaining a presence and operations in Norway’s maritime areas of interest. In addition, the Armed Forces do not have sufficient volume to carry out operations over extended periods of time. In a military context, quantity is often a quality in itself.

The Armed Forces also face challenges and shortcomings in terms of personnel, materiel, ammunition, fuel, ICT and real estate and infrastructure. The personnel and competence situation represents the greatest risk factor for the development of the Armed Forces. Unless measures are implemented by 2028, the sector risks having a shortfall of around 1,000 commissioned officers and 1,700 non-commissioned officers. The Armed Forces are recruiting effectively, but there is a trend that experienced personnel leave the Armed Forces in order to pursue a civilian career. Personnel leaving the armed forces are increasing the need for education and training, while at the same time reducing the level of experience available within the organisation. If nothing is done to turn this trend urgently, the Armed Forces will face considerable challenges in realising the current structure. It will also be difficult to succeed both with the planned development and strengthening of the structure.

The Armed Forces will need to upgrade, modernise and replace a lot of materiel over the coming years. Despite substantial investments in, for example, aircraft, vessels and combat vehicles, insufficient funding has led to challenges in many areas to facilitate ongoing updates, spare parts, ammunition and new equipment. The same issue is also being faced by the Armed Forces with regards to other materiel and equipment. Ammunition stocks are insufficient. The greatest consequence for the combat endurance of the Armed Forces is a shortfall in stockpiles of combat-decisive ammunition. Given the prevailing security situation, this trend must be reversed.

Norway is currently producing large quantities of fuel, and the civilian sector has sufficient capacity as regards storage and transport of the most common types of fuel. However, the ability
Artillery ammunition handling.

The Norwegian Home Guard conducting border control during the pandemic.
The status of the Armed Forces to transport and store fuel outside fixed infrastructure is limited, which reduces the combat endurance of land forces in particular.

The Armed Forces’ ICT is the foundation that underpins the future digitalisation of all the Armed Forces’ processes and is crucial for daily operations, management of the Armed Forces and the sharing of situational awareness. ICT is particularly important for multi-domain operations and facilitates the effective utilisation of modern weapons platforms. The Office of the Auditor General has identified a number of challenges within Armed Forces information systems, which over time have been characterised by a lack of modernisation and a significant gap between actual condition and needs. The ability to protect Armed Forces systems against cyber security threats is also limited. Over time, the defence sector has failed to realise effective and secure information systems which meet the necessary security approvals. Fragmented responsibility for the operation and management of ICT within the sector has led to a lack of overview and disparate interpretations of roles and responsibilities.

Maintenance, preservation and upgrades of real estate infrastructure have not been funded sufficiently over time. The backlog is considerable and growing. Investments and changes in the structure have not been followed up with funding to establish and adapt the necessary real estate and infrastructure. This lack of priority means that personnel often have to live in barracks that do not meet expected standards and that materiel and equipment is stored in unsuitable facilities or outdoors. The backlog of maintenance of NATO-funded infrastructure, including areas for air operations, ammunition storage and fuel stockpiles, reduces the capability of the Armed Forces to support allied reinforcements in Norway.

The defence sector comprises the following agencies: Norwegian Armed Forces, Norwegian Defence Materiel Agency, Norwegian Defence Estates Agency and Norwegian Defence Research Establishment. In addition, the National Security Authority represents an important contributor to the defence sector. The defence sector is headed by the Ministry of Defence. Through the interaction between the agencies, as well as between the ministry and the agencies, there is considerable potential to streamline the processes. This Military Advice does not consider this potential in any detail, because many initiatives have already been implemented within what is known as the modernisation and efficiency programme. In addition, the Government has signalled an organizational reform which will clarify roles, responsibilities and authority within the defence sector.

The relationship between the tasks, structure and finances of the Armed Forces is not currently well-balanced. The challenges facing the Armed Forces relating to personnel, materiel, ammunition, ICT and real estate and infrastructure are having a negative impact on operational capabilities. The Armed Forces also have weaknesses and shortcomings in the composition of their capabilities, particularly as regards to maritime presence and warfare, protection from air threats and long-range precision fire. The Armed Forces’ combat endurance and ability to operate over a prolonged period of time is marginal. These deficiencies and challenges essentially mean that the Armed Forces will not be able to carry out their most demanding tasks in a satisfactory manner.

* Home Guard soldiers wearing out-dated uniforms.

* Typical older Norwegian barracks
Chapter 5

More funding needed to realise the adopted structure

The basis for the current development of the structure and operational profile of the Armed Forces is set out in the current long-term plan and associated financial planning framework. In Report to the Storting (Meld. St. No. 10 (2021 – 2022)), the Government stresses that the long-term plan assumed excessive risk in its implementation. The Armed Forces maintain daily operations and a presence in priority areas, but have too little combat endurance and insufficient contingency stocks.

The analysis of the status of the Armed Forces and related calculations indicate that there are many challenges associated with realising the level of ambition within the planning framework. This is due to overly optimistic cost estimates, unexpected additional needs over and above the planning assumptions and investment and planning processes delaying and increasing the cost of procurements.

Additional costs for materiel and real estate and infrastructure projects create a difference between the need for investment funding and the funding that has been allocated to the investment plan. This difference amounts to several billion Norwegian kroner as regards materiel and real estate and infrastructure. When known additional needs are added to the mix, the shortfall becomes even greater. Additional needs are essential investments which are not included in the investment plan, but which are considered necessary to realise the objectives of the current long-term plan.

Furthermore, the assumptions underlying the level of ambition for supply preparedness and ammunition have changed. The current long-term plan takes account of risk in these areas by accepting a lower level of ambition. The Armed Forces may be able to carry out day-to-day operations, but they have limited combat endurance in the defence of Norway and its allies against serious threats, strikes and attacks. Similarly, the long-term plan accepts risks associated with the maintenance of real estate and infra-
Security in uncertain times

The condition of much of the building portfolio is currently at a level that requires considerable funding in order to preserve its value. Barracks, logistics and support functions, training and exercise facilities, along with facilities for receiving allied reinforcements, are of great importance to national operational capability. Better value preservation of real estate and infrastructure will reduce the need to build new, and therefore have a positive effect from a sustainability perspective.

Since the publication of the current long-term plan, the assumptions used in the economic planning process have changed. For example, the cancellation of the NH-90 maritime helicopter impacts the planning basis, and the cost of replacing this capacity is contributing to an increase in the additional funding that will be needed. Furthermore, delays in the delivery of new submarines will lead to a need for major investment to extend the life of the Ula class submarines.

In addition to incorporated overheads, there are many known needs that have not been included in the investment plan. These needs include ICT, personal clothing and equipment for the entire force structure, as well as satisfactory real estate and infrastructure for personnel and educational institutions within the Armed Forces.

Overall, the current long-term plan and its associated level of ambition have a financial shortfall that will render it impossible to realise the structure that has been described. If the current long-term plan, which does not include combat-decisive ammunition, for example, as an objective, is to be realised, an estimated additional NOK 58 billion will be needed through to 2028. Assuming that the level of ambition is adjusted upwards to include combat-decisive ammunition and value preservation, additional funding of just under NOK 80 billion will be needed through to 2028.

The Norwegian Defence Research Establishment’s defence analysis from 2023 points to underfunding of the Armed Forces of at least NOK 30 billion through to 2030. The analysis is based on known investment figures from early 2022 and uses the level of ambition in the long-term plan as a basis for its estimates. This Military Advice differs from the defence analysis in that it also takes account of other factors such as the need to build up combat endurance with regard to ammunition and the necessary value preservation of real estate and infrastructure. In addition, consideration is given to investments that are deemed necessary in order to realise the described ambition that do not currently form part of the investment plan. This Military Advice is based on what the Chief of Defence believes are essential operational requirements for the structure.

Armed Forces vehicle from the 1980s.

Ammunition – a precondition.
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Chapter 6

Adaption of the Armed Forces structure to the adopted financial framework

This chapter describes how the Armed Forces must be adapted in order to align with an economic direction that is based on the current long-term plan and associated economic planning framework.

There is an imbalance between the Armed Forces’ tasks, structure and finances. Through to the end of 2028, the Armed Forces are expected to realise a number of expensive investments. In addition, as explained previously, it was decided that consideration should be given to risk relating to ammunition stocks and value preservation as regards real estate and infrastructure. The Armed Forces are currently underfunded. Over time, this imbalance has resulted in a defence structure that would not have the necessary stamina or robustness to provide sufficient resistance in a conflict or war, particularly over an extended period of time. If the decided financial framework is maintained, clear priorities must be established within the Armed Forces.

An approach based unilaterally on terminating or adjusting investments is unsustainable over time. The Armed Forces must therefore implement structural measures, which will entail substantial cuts in the structure combined with adjustments to planned investments.

Adjusted priorities and level of ambition

If the approved financial framework is retained, the Chief of Defence believes that the priorities and level of ambition established for the Armed Forces must also be adjusted accordingly. The Chief of Defence recommends that priority should continue to be given to capabilities that contribute to situational awareness in our areas of interest, and to maintain the capability to enforce Norwegian jurisdiction, sovereign rights and security interests. Prioritising situational awareness will enable the Norwegian Intelligence Service to continue to perform its functions, but future growth must be deferred. Timely intelligence, surveillance and target data acquisition are emphasised and will continue to be critical with regard to the Armed Forces.
Adaptation

The Armed Forces must maintain their ability to inflict losses on an adversary, both on their own and alongside allies. If the structure is reduced, the Armed Forces must retain their capability to take part in joint operations in order to exploit synergies across the domains. To ensure sufficient firepower and mobility, the Armed Forces must retain a core set of capabilities consisting of a brigade structure, combat aircraft, air defence systems, maritime patrol aircraft, frigates, submarines, the area structure of the Home Guard and special forces. These core capabilities help the Armed Forces to maintain their joint operations capability and provide the necessary capacity to both find and inflict losses on an adversary in all domains. Parallel to this, it will be necessary to prioritise certain rapid response forces.

The sum of the proposed measures will help to create some financial leeway in order to gradually increase quantities of ammunition and implement measures that extend the combat endurance of the remaining structure.

Any reduction in defence capabilities will increase the importance of allied cooperation and reinforcements. The ability to receive allied reinforcements and transport them onwards must therefore be given the greatest possible priority. At the same time, allied forces must be better prepared to protect their own transport, particularly at sea. A national defence system that is less compliant with NATO’s Article III could also weaken the Alliance’s cohesion and collective defence and deterrence capabilities.

In summary, defence capability will be weakened. The ability of the Armed Forces to perform their assigned nine tasks and achieve the current level of ambition will also be challenged.

Joint elements

The Norwegian Special Forces is a strategic capability with a high level of readiness. Special forces have a high level of expertise which take a long time to build up. The role of the special forces in crisis management and counterterrorism must be maintained through a core consist-

The core of the Armed Forces with an adapted structure

- Combat aircraft
- Maritime patrol aircraft
- Brigade
- Frigates
- Air defence
- Special forces
- Home Guard companies
- Submarines
"An approach based unilaterally on terminating or adjusting investments is unsustainable over time. The Armed Forces must therefore implement structural measures, which will entail substantial cuts in the structure combined with adjustments to planned investments".

The land domain
In the land domain, the Army and Home Guard must reduce their structure, including terminating new planned establishments and investments. In addition, the leadership, administration and base operations of the Army and Home Guard must be reduced in line with a reduced structure.

Brigade North will remain the core of the Army's structure. Brigade North will be remain as today to ensure firepower and mobility on the land domain. A brigade is an independent capacity that can be integrated both with allied forces and in joint operations. The establishment of the 4th Mechanised Battalion will be terminated, which will result in Norway failing to meet NATO's requirements in this area. The planned acquisition on long-range precision fire will be continued in order to enhance the capability to inflict losses on an adversary and create joint operational effects.

In order to reduce operational and investment costs at Terningmoen, the Armed Forces must abandon the ambition of establishing a joint basic training unit for the armed forces. As a consequence, the training of recruits must be integrated in the operational units, with the exception of His Majesty The King's Guard.

Finnmark Land Command in its current form will disband. The border guard will continue to monitor the Norwegian-Russian border. New infrastructure being established at the Garrison of Porsanger will be completed to facilitate both Norwegian and increased allied training and exercise activities, and maintain a minimum of presence in the High North.

To ensure situational awareness, the Army's Intelligence Battalion will remain in its current form.

The Chief of Defence recommends that the structure of the Home Guard must be reduced. Cuts in the Armed Forces and the Army in par-
Adaption

The role of the Norwegian Coast Guard in enforcing Norwegian jurisdiction and sovereignty will be maintained. Within the maritime domain, the proposed approach involves the Royal Norwegian Navy continuing to use frigates (with reduced capability), submarines, KNM Maud and the Norwegian Coast Guard. Cuts in the structure of the Navy will considerably reduce the Navy’s firepower and necessitate a reduction in the Armed Forces’ operational level of ambition within the maritime domain. The Armed Forces will not be able to achieve the ambition of controlling the sea and will be forced to focus on denial.

The air domain

Within the air domain, the Chief of Defence recommends to prioritize the Royal Norwegian Air Force’s primary mission of fighting for air supremacy and contributing to anti-submarine warfare in the maritime domain. Combat aircraft, air defence systems and maritime patrol aircraft, combined with early-warning radar systems, constitute the core of the Air Force, and must therefore be shielded from cuts insofar as is particular, will lead to a reduction in the intake of conscripts, which will also limit the pool for recruiting to the Home Guard. In addition, the financial framework will force a reduction in the level of training, which in turn will lead to a gradual reduction in the operational capability of the Home Guard. The core organisation of the Home Guard is the territorial structure, and this must be reduced to a level that will permit essential training, while at the same time maintaining local presence to the greatest extent possible. The capability to protect critical infrastructure worthy of protection will be reduced, and the level of ambition for many of these installations and infrastructure will be reduced from protection to surveillance. The Chief of Defence also recommends that the Home Guard’s rapid reaction forces be cut in favour of preserving the territorial structure. The current eleven Home Guard districts commands will be adjusted to four regions in order to reduce operational and infrastructure costs. A transition to four regions will render cooperation with actors within the total defence.

Overall, the reductions in the land domain will reduce both responsiveness and combat endurance. In addition, the Armed Forces will not meet NATO’s requirements regarding land forces. The operational level of ambition must be lowered and the presence of the Armed Forces within the land domain in the High North will be reduced.

The maritime domain

Within the maritime domain, the Armed Forces must accelerate the phasing out of existing structures within the Navy, cut structural elements and halt planned investments. Management, administration and base operations must be adapted to be consistent with a smaller structure. Tasks afforded a lower priority must be terminated.

The Chief of Defence recommends that the Armed Forces retain a core centred around frigates and submarines to ensure both a denial capability and the capacity to inflict losses on an adversary in the maritime domain. To enable the core to maintain an adequate level of readiness and availability, other parts of the structure will have to be cut significantly. The following structures and associated projects must be either cut or phased out earlier:

- Norwegian Naval EOD Command
- Mine Clearance Squadron (Alta/Oksøy class)
- Corvette Squadron (incl. Reine-class)
- Royal Norwegian Navy Medical Services
- Norwegian Coastal Ranger Commando.
- Fleet Logistics Command (Marinens Logistikk kommando/MLK and the Reine class).

The Royal Norwegian Navy’s frigates should undergo upgrades to secure operation in line with the classification company’s regulations and requirements. The role of the Norwegian Coast Guard in enforcing Norwegian jurisdiction and sovereignty will be maintained.
possible. This will enable the Armed Forces to retain their capability to contribute situational awareness, inflict losses on an adversary and contribute to joint operations in the air domain.

In the air domain, the Armed Forces must cut structures that do not contribute to the core mission in their entirety. In addition, management, administration and base operations must be adapted to a smaller structure. The Chief of Defence recommends that the Royal Norwegian Air Force should not upgrade its Bell 412 helicopter capabilities and that the helicopters be phased out at the end of their life cycle. In addition, ongoing procurement processes relating to new tactical transport helicopters for the Army and special forces will be terminated. This will lead to a reduction in responsiveness, as well as reduce tactical mobility and the ability to support special operations. The already approved procurement of maritime helicopters will continue in order to support operations in the maritime domain. Helicopter support for the police will cease when the Bell 412 is phased out.

The Armed Forces’ C-130J Hercules tactical transport aircraft will also be withdrawn, which will reduce the mobility, responsiveness and medical evacuation capability of the Armed Forces. Cuts in tactical transport capability will also reduce the ability of the Armed Forces to manage unexpected situations and crises both in Norway and abroad.

In summary, cuts in the air domain will reduce the Armed Forces’ mobility and responsiveness, as well as their ability to respond to situations at home and abroad.
This chapter covers a development path with a level of funding that is lower than assumed in the current long-term plan.

As outlined above, continuation of the financial framework will result in a considerably reduced structure. The structure of the Armed Forces will be altered significantly if the financial planning framework is reduced. The imbalance between task, structure and funding will be amplified, and the ability of the Armed Forces to manage both the current and future security situation will be further weakened. As a result, the Chief of Defence does not believe it is possible to provide military advice describing the development path of the Armed Forces with an appropriation level lower than that assumed in the current long-term plan.

A development path that accommodates a smaller economic planning framework must build on the direction that is described under the continuation of the current economic framework and will entail further reductions in the volume and capabilities of the Armed Forces. Given such a development, the Chief of Defence recommends an approach whereby the task, structure and economic framework are assessed holistically to ensure a mutual balance for the future operation and development of the Armed Forces.

If such a development path were to become reality, the Chief of Defence would ask to be invited to participate in discussions concerning the level of ambition for the Armed Forces and the tasks that the Armed Forces are to perform, and would then contribute military advice concerning subsequent developments. The basis for such a discussion, given that the Government and the Storting wish such a development, should be concrete alternative frameworks for economic development, as different frameworks would entail different orientations for the Armed Forces and their tasks.
This chapter describes a development path that recommends prioritised measures for a scalable strengthening of the Armed Forces in both the short and the longer term.

The structure of the Armed Forces under the current long-term plan forms a good starting point for further development. The analysis for this Military Advice indicates that the current capabilities and structural elements should be continued. The Chief of Defence’s recommendations to follow are therefore based on the existing structure.

At the same time, there are a number of challenges that must be overcome. The Armed Forces have weaknesses with regard to personnel, materiel, ammunition, ICT, real estate and infrastructure. These weaknesses affect the Armed Forces negatively and must be resolved by ensuring that capabilities are resourced sufficiently and in a balanced manner. The structure of the Armed Forces must also be developed to possess an appropriate mix of capabilities with sufficient volume to meet both the current situation and future developments. Although the current long-term plan seeks to strengthen current defence capabilities, the Chief of Defence believes that changes in underlying assumptions have led to a situation where the structure and investment being made are insufficient. The challenges are particularly marked with regard to operations in the maritime domain, the capability to defend civilian and military infrastructure against air threats, the capability to engage targets at long range, and the capability to face the most challenging situations over time.

The Chief of Defence recommends to strengthen the Norwegian defence through five focus areas with basis in the defence concept, the previously decided structure and the current status of the Armed Forces. The focus areas establish a course for the development of the Armed Forces. Within the focus areas, both new capabilities as well as an increase in volume will be introduced.
The ability to defend Norway does not require that all proposed new capabilities and increases in volume be realized. The Norwegian defence concept means that Norway as a nation will not face an adversary alone. Through our alliance affiliation, all attacks on Norway will be met with resistance. However, any growth will improve the capability of the Armed Forces to resist aggression and help reduce risks and vulnerabilities. The Military Advice therefore emphasizes scalability and offers priorities both within and across the focus areas.

The Chief of Defence recommends a development path that is consistent with the following focus areas, listed in order of relative importance:

- Eliminate weaknesses in the current structure
- Maritime surface structure
- Air defence
- Long-range precision weapons
- Increase the volume of the Armed Forces

To ensure scalability, the Chief of Defence recommends a growth strategy that can be adapted to any increase in the economic trajectory. Given sufficient economic room for manoeuvre, the strengthening across the focus areas should be carried out in parallel. Given a limited increase in economic room for manoeuvre, the following growth strategy is recommended, where the size of the allocated funding will determine how many and how much of the focus areas can be realised:

- Initially, it is recommended that weaknesses in the current structure be rectified, at the same time as already approved structural elements are introduced.
- Parallel to this, the focus should gradually be shifted to strengthening the ability to conduct maritime operations by replacing the surface vessel structure.
- Then the capability to protect Norway against air threats must then be strengthened.
- The Armed Forces must then enhance their ability to inflict losses on an adversary through the use of long-range precision weapons.
- Finally, the Chief of Defence will give priority to measures that increase the Armed Forces’ volume to ensure greater combat endurance and the ability to operate in several areas simultaneously.

A priority has been stipulated within each focus area. Through these priorities, the Chief of Defence highlights what is most important. At the same time, not all measures within one area need be addressed before measures in other focus areas can be implemented.

Irrespective of the economic room for manoeuvre, appropriate synchronisation within the defence sector is vital, and any growth must take into account the sector’s ability to deliver.

Focus area: Eliminate weaknesses in the current structure

To enable existing and approved structural elements of the Armed Forces to achieve satisfactory operational capability, the Chief of Defence recommends measures in this focus area which help to remedy identified weaknesses in the structure, with an emphasis on the following areas:

- Fill the structure with sufficient expertise and personnel.
- Ensure that real estate and infrastructure meet the requirements for satisfactory living and working conditions for personnel.
- Increase materiel and ammunition stocks.
- Modernise and streamline the Armed Forces’ ICT.

These measures form part of a whole and are interdependent in some areas. The strengthening must therefore take place in parallel with measures in several areas. To ensure sufficient firepower and mobility, the Armed Forces must give priority to remedying deficiencies relating...
to the brigade structure, combat aircraft, air defence systems, maritime patrol aircraft, frigates, submarines and special forces. At an overarching level, however, priority should be given to factors that contribute to the strengthening of the Armed Forces’ personnel status and ammunition stocks.

The Armed Forces lack sufficient personnel and expertise, and this will become a considerable challenge if action is not taken soon. The Chief of Defence considers that personnel and expertise will require a particular focus over the coming years, and supplementary advice on this area is therefore provided in a later chapter. The Armed Forces must step up their efforts to recruit, retain and re-recruit competent personnel. Education quotas and the capacity to train commissioned officers, non-commissioned officers and enlisted personnel must be increased, in this order of priority. This priority is based on the duration of the training and the time it takes to acquire the necessary experience. Increasing the training of officers will require measures relating to real estate and infrastructure and available personnel at the Armed Forces’ schools. The increase must be given immediate priority in order to secure personnel with the right skills and expertise, both to realise the current growth targets and in case additional growth is implemented in line with this military advice.

Real estate and infrastructure will require a special focus going forward, and a supplementary recommendation on this will follow later in this advice. Real estate and infrastructure create operational capability and the Armed Forces are dependent on having infrastructure that meets both their operational needs and applicable technical standards. The Chief of Defence recommends establishing the necessary infrastructure and focusing on maintenance and the execution of essential upgrades. Priority should be given to relevant factors which secure satisfactory living and working conditions for personnel, followed by value preservation, which is crucial for the Armed Forces’ operational capabilities, including receiving allied reinforcements.

The Armed Forces must increase their stocks of materiel and supplies to strengthen the combat endurance of the structure. The opportunities that are inherent in direct procurement should be explored in order to boost stocks more rapidly. The following materiel should be procured for the Armed Forces’ structure in the following order of priority: Personal equipment (including small arms), spare parts and then medical supplies and other consumables (should be procured and stored in cooperation with the total defence system).

To ensure the necessary responsiveness and combat endurance, the Chief of Defence recommends procuring the estimated quantities of combat-decisive munitions that are considered to be needed as soon as possible. At the same time, within the framework of the total defence system, the Armed Forces should establish access to the estimated quantities of fuel needed to ensure readiness.

Repairs to combat-vital materiel, including available spare equipment, should be accelerated. Certain categories of materiel should be retained in a war reserve, rather than disposed of. The Chief of Defence recommends urgently implementing critical modernisation measures within the field of the Armed Forces’ ICT, with an emphasis on information systems. This modernisation will help to ensure the establishment of robust and secure digital foundations with sufficient capacity. Capacity to implement cybersecurity measures and defensive cyber operations should also be stepped up to safeguard freedom of action in the cyber domain. To ensure the appropriate operation of existing ICT systems, both expertise and capacity relating to ICT should be strengthened.

The Chief of Defence also recommends the comprehensive restructuring of ICT operations within the sector. The defence sector should
consider consolidating and concentrating its operations in an organisational unit with a joint management team with responsibility and authority for managing the ICT organisation, e.g. under the Chief of Defence. It is furthermore recommended that duplicate functions be consolidated and that the capacity and endurance of the overall ICT organisation be strengthened. This will reduce coordination needs and costs, and enhance the ability of the Armed Forces to make use of new technology more rapidly.

The defence sector must take account of national and allied planning documents before disposing of operational air basing infrastructure earmarked for allied reinforcements. Norway should gradually improve existing operational air infrastructure in cooperation with NATO. The Chief of Defence also recommends procuring necessary stockpiles as regards materiel, ammunition and fuel in relevant staging and response areas, including decentralised weapons and ammunition stockpiles for the Home Guard’s area structure.

Focus area: Maritime surface structure
Norway’s extensive marine areas, long coastline and significant economic interests in the maritime sector make it necessary to enhance the ability of the Armed Forces to deal with activities that threaten and challenge national interests underwater, on the surface and in the air. Russia has its main naval base on the Kola Peninsula and is developing modern, quiet and highly potent submarines. Anti-submarine warfare capability, in cooperation with allies, especially the United States and the United Kingdom, will therefore remain a priority capability into the future.

Our allies will have a more extensive and active presence in our neighbouring regions. The ability to shape, coordinate and participate in such activities is even more important today than it was in the past.

Developing the ability to face up to current and future security challenges will require investment in new capabilities relating to warfare in the maritime domain. The Navy consists of a number different types of vessels with distinctive and to some extent outdated systems. These vessels are resource-intensive to maintain and operate, which when combined with outdated technical systems results in reduced operational capability and availability for mission execution. The Coast Guard also has vessels that will need to be replaced over the coming decade.

The Chief of Defence therefore recommends strengthening and renewal of the maritime surface structure. In order to reduce the breadth of variants, it is necessary to view the entire structure in context and establish a programme area for maritime surface structure. It is recommended to maintain close cooperation with close allies in connection with both the acquisition and operation of the most advanced combat vessels in the Navy. This form of standardisation with partners is taking place with regard to new submarines and should also form the basis for the procurement of new frigates.

The current structure does not have sufficient capacity to meet the operational needs that are required to be met across the entire spectrum of conflicts in the maritime domain. The capabilities and needs that must be addressed have been deduced through the fundamental analysis conducted in connection with the preparation of this Military Advice. The number of vessels recommended for procurement for the Armed Forces is based on an assessment of operational and lifetime costs, and the assumption that the most challenging tasks in our maritime areas will take place within an allied and joint operational framework. In addition, the assessment takes into account the need for the ongoing execution of missions across the whole conflict spectrum in order to safeguard Norwegian interests in the High North.
Security in uncertain times

**Standard vessels**

In addition to the frigates, the Chief of Defence recommends that the surface structure of the Navy be built around large and small standard vessels. These vessels should be based on tailored civilian standards, as this approach would streamline both operation and support throughout their lifetime and enable the phasing in of more environmentally friendly propulsion methods. The Chief of Defence recommends the procurement of up to four large standard vessels and up to 16 smaller standard vessels with modular weapons and sensor systems.

The standard vessels will complement the frigates, but will not be able to replace them. They will also contribute to the cost-effective supply of quantity for the execution of maritime warfare. The number of frigates and large standard vessels must be seen as a whole to ensure sufficient capability in order to maintain a presence in the maritime domain, both nationally and in an allied context. The standard vessels must have the capability to interact in modern joint operations and must be capable of being equipped with anti-surface capabilities and self-protection against air threats. The large standard vessels must have blue water capabilities and the capacity to carry large modular solutions. Depending on their size, the vessels should have a limited ability to participate in anti-submarine operations and be capable of being used as a platform for minelaying, mine clearance and maritime security operations, including force protection in Norwegian territorial waters.

The Chief of Defence recommends to eventually replace the Coast Guard’s vessels that do not carry helicopters with a combination of large and smaller standard vessels. The Coast Guard’s standard vessels are equipped for Coast Guard operations on a daily basis, but must be able to be equipped with modular systems as and when necessary. It is recommended that the Coast Guard’s helicopter-carrying vessels and KNM Maud be continued without alteration.

**Frigates**

Maritime operations in Norway’s neighbouring regions require vessels that are highly capable and are able to operate in challenging weather conditions. To enable Norway and its allies to secure our defence capabilities and receive allied reinforcements along the coast, while at the same time participating in maritime operations, the Chief of Defence recommends that a minimum of four and preferably six new frigates be procured. This type of vessel is in great demand by NATO and is capable of making a relevant contribution to the Alliance as regards operations beyond the shores of Norway. It would be inadvisable to procure fewer than four, as doing so would result in insufficient operational availability for the execution of missions. Six frigates would almost double the operational availability, enabling the Armed Forces to carry out several missions simultaneously. The number of frigates must be viewed in the context of the procurement of the ocean-going standard vessels described later in this report. The existing frigates will be phased out and replaced by new ones.

The frigates must be equipped with helicopters for the detection and engagement of submarines, or alternatively unmanned systems if the technology is sufficiently mature by the time the frigates are introduced. The combination of frigates, helicopters and/or unmanned systems makes it possible to engage submarines before the frigate comes within range of the submarine’s torpedoes. The frigates must also be able to engage threats both in the air and on the surface. The capability to conduct anti-submarine operations will require further investment in complementary capabilities such as satellite surveillance, stationary sensor systems, maritime patrol aircraft and submarines, in addition to sensors and weapon systems based on surface vessels.

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The Chief of Defence recommends replacing the Navy’s ageing surface structure and reducing the breadth of variants in use over the next few decades. In addition to new frigates, the rest of the maritime surface structure will be built up based on two sizes of standard vessel. The vessels have an area of use and an operating profile that makes it possible to make extensive use of civilian standards and solutions. Cost reductions, a lower risk of obsolescence and commercially available maintenance expertise are identified as positive consequences. Modernisation of the maritime maintenance concept in line with the idea that vessels should be as civilian as possible and as military as necessary will help to keep costs down and ensure operational availability. A standard vessel class is also well-suited to the adoption of innovations within the Norwegian maritime industry, including more environmentally friendly propulsion systems that both reduce greenhouse gas emissions and are potentially quieter.

Current vessels

Skjold-class

Reine-class

Boa-class

CGV Harstad

Future vessels

Modular weapons- and sensor technology

Anti-submarine
Mine counter-measures

NSM

UAS/Counter-UAS

Coastal Rangers / Force protection

Large standard vessel

Small standard vessel

Standard vessels

The ability to carry out missions is thus not limited to the design of the vessel itself. The standard vessels complement and support warfare capabilities in the maritime domain with distributed sensors and effectors. All standard vessels must have the capability to interact in modern joint operations and must be capable of being equipped with anti-surface capabilities and self-protection against air threats. The difference between the large and small standard vessels is that the large vessels have ocean-going characteristics and the capacity to carry large modular solutions. Depending on their size, the vessels must have a limited ability to participate in anti-submarine operations and could be used as a platform for minelaying, mine clearance and maritime security operations/force protection.
Scalable strengthening

3 Start the gradual phasing-in of new frigates to replace the Fridtjof Nansen class

Focus area: Air defence

Weapons development is making it possible to hit targets across the whole of Norway with cruise missiles, ballistic missiles and unmanned aerial systems, as has been clearly demonstrated in several conflicts in recent years. Resilience and the ability to protect critical military and civilian infrastructure from aerial threats require a layered approach with a combination of air defence systems with different ranges and capabilities. Air defence also helps to improve the survivability of the Armed Forces’ forces, especially large and static structures such as air bases.

The Armed Forces lack sufficient air defence to protect military targets and functions within civil society at the same time. In addition, the Armed Forces lack any capability to provide protection against ballistic missiles. The ability to protect against smaller unmanned systems and drones is marginal.

Firstly, the Chief of Defence recommends increasing the volume of the Armed Forces’ existing short- and medium-range air defence systems, so that they can protect both civilian and military areas at the same time, and then investing in new long-range air defence systems that can also provide protection against ballistic missiles. The ability to protect against smaller unmanned systems and drones is marginal.

The Chief of Defence then recommends the establishment of a multi layered air defence system for the land forces. Both Brigade North and Finnmark Land Command should be equipped with short-range air defence systems that are also effective against drones. In addition, it is recommended to establish an Army air defence battalion, within the framework of the NASAMS.
system with short-, medium- and long-range air defence capabilities. A portion of the air defence system should be based on mobilization.

In the maritime domain, protection against air threats is important, in order to protect both vessels and maritime installations. The need for air defence systems beyond self-protection must be assessed holistically in relation to the intended primary role of the vessels within anti-submarine warfare.

Existing air defence systems have limited effect against hypersonic missiles. However, it is expected that such systems will be developed over the coming years and the Chief of Defence recommends that Norway monitor these developments closely.

In addition to the missile threat, it is important that the Armed Forces are able to protect units, installations and objects against unmanned aerial systems. Defending against small, portable systems is particularly difficult and imposes new demands. The Chief of Defence recommends the development of defence systems against unmanned systems as part of the integrated air defence system.

It is difficult to fully guard against a modern air threat. Air defence systems must therefore be supplemented with measures and operational concepts that help to boost resilience and survivability. Dispersal concepts and other measures that enhance the ability of the structure to maintain operations in the face of attack are important.

Focus area: Long-range precision weapons
The Armed Forces must have the ability to influence an opponent through a wide range of means. The ability to fight back becomes especially important in an armed conflict against an adversary that operates a number of different types of long-range weapon systems. In order to enhance the Armed Forces' ability to inflict casualties on an adversary, the Chief of Defence recommends increasing the Armed Forces' capabilities as regards long-range precision fire in all domains.

In order of priority, the Armed Forces should bolster firepower in the northernmost part of the country by strengthening already approved investments in long-range precision weapons in the current long-term plan to establish a fully-fledged rocket artillery battalion. The Armed Forces should then establish a long-range artillery battalion as part of Finnmark Land Command. In the maritime domain, a future surface structure must be geared towards the delivery of long-range firepower. In addition to the approved acquisition of Joint Strike Missiles, Norwegian combat aircraft must then be armed with relevant weapons such as radar homing missiles to enhance the Armed Forces' ability to break through the adversary's air defences.

Long-range precision weapons require appropriate processes and systems for targeting at all levels. The Armed Forces must have access to sensors that can find targets in an opponent's rear areas, and weapons platforms and decision-makers must be able to make use of the information quickly. Special forces can contribute in the form of target acquisition against targets at depth, and these forces have an excellent ability to adopt new technology, which can help to exploit the benefits of precision weapons, regardless of the platform being used. Sensors and communication carriers in the space domain are particularly important in this context. In addition, operations and the use of long-range firepower against an adversary's rear areas can be supported and amplified through operations in the cyber domain and the electromagnetic spectrum.

Focus area: Increase the volume of the Armed Forces
The volume of the Armed Forces should be increased in all domains in order to strengthen combat firepower and facilitate effective joint operations, over and above the strengthening described for other focus areas. An increase
in volume will make it possible to concentrate forces on key tasks and the ability to operate in several regions at the same time, both in Norway and abroad. A greater volume will also give the Armed Forces the necessary combat endurance to sustain both low- and high-intensity operations over a prolonged period of time.

Within the focus area, measures that enhance the capabilities of the Armed Forces as regards situational awareness, command-and-control, firepower and mobility should be given emphasis. The Chief of Defence therefore recommends that the following measures be afforded priority depending on the allocated financial framework: strengthening of elements of comprehensive intelligence, elements within the cyber and space domains, the acquisition of new helicopters, increasing the number of submarines, establishing a brigade based on mobilization and strengthening the air surveillance radar chain. In addition, the focus area outlines further proposals that should be realised assuming sufficient financial room for manoeuvre.

Joint elements

The Armed Forces must continue to exploit new technology and develop new operational concepts in order to facilitate effective joint operations. The Armed Forces’ joint operations must be able to seamlessly link together sensors, effectors and decision-makers to ensure operations can be carried out at a high tempo and with great flexibility. The Armed Forces should therefore align with NATO’s concept of multi-domain operations, which places demands on the Armed Forces’ capabilities, ICT, operational processes and command-and-control concept.

The Armed Forces must be able to share large quantities of information rapidly, both nationally and with allies. Alongside communication technology, digitalisation and decision support technology are pivotal. The Chief of Defence recommends exploiting the opportunities inherent in artificial intelligence, including machine learning in order to exploit big data, by establishing a common strategic objective for this sector. The Armed Forces must emphasise the holistic and continuous development of processes, technology and organisation in order to exploit the potential inherent in multidomain operations. Such a development will also entail changed requirements as regards skills and expertise. Norway should have the ambition of being able to lead allied forces up to what NATO calls ‘Small Joint Operations’, either on or adjacent to Norwegian territory and at both joint operational and tactical levels.

The Chief of Defence recommends strengthening the capabilities of the Armed Forces as regards holistic intelligence. A continuing focus on intelligence will be essential for national situational awareness, which in turn forms the premise for the Armed Forces’ decision-making processes and operations. The Armed Forces must further develop their ability to acquire data and information concerning the military capabilities, operational patterns and intentions of threat

Electromagnetic operations

The electromagnetic spectrum can be used to reinforce or create new operational effects. In addition to the fact that the Armed Forces must be capable of carrying out electromagnetic operations to support their own operations, the structure must be prepared for an adversary attempting to use the electromagnetic spectrum against us or interfere with and deny our use.

Both NATO and our closest Allies have a strong focus on creating structures that can effectively facilitate defensive and offensive electromagnetic operations. The Armed Forces must monitor the developments closely.

Greater use of the electromagnetic spectrum imposes increased demands on the coordination of available frequency ranges, and civilian use may impose restrictions on military use in peacetime.
Security in uncertain times

Scalable strengthening

The Chief of Defence recommends that the special forces be further developed with a focus on quality and competence. The special forces should be concentrated around the four bases Rena leir, Haakonsvern, Karljohansvern and Ramsund. The Norwegian Armed Forces must strengthen their ability to lead special operations both nationally and within the framework of NATO, as well as enhance their ability to integrate with allied special forces. The Norwegian Special Forces Command must be developed further and consolidated into a fully-fledged leadership element which can meet national and allied needs. The special forces are characterised by an ability to rapidly develop, test and introduce new technology. This special characteristic must be continued and strengthened.

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The Chief of Defence recommends enhancing the ability of the Armed Forces to carry out electromagnetic operations in all domains. First and foremost, the professional leadership must be strengthened, and competence in key areas of the structure increased. In addition, the ability to lead electromagnetic operations and maintain situational awareness must be enhanced at the operations headquarters, in particular by completing the establishment of the electronic warfare centre at the Norwegian Joint Headquarters. Finally, Armed Forces units must have the ability to exploit the electromagnetic spectrum and protect themselves against electromagnetic threats. This should be considered separately in certain materiel procurements. The Armed Forces must improve their access to training systems that can support training and exercises in offensive and defensive electromagnetic operations.

The Chief of Defence recommends strengthening the ability to support Allied operations in Norway and in our neighbouring areas. The Armed Forces’ ability to lead the reception, alignment and further transport of Allied forces should be strengthened. This includes the ability to lead Allied receiving and transport units, in different parts of the country, at the same time. Reception and support of Allied forces is the subject of more detailed advice in a later chapter.

The Chief of Defence recommends increasing the capacity for medical air evacuation by hiring civilian capacity equivalent to the “SAS agreement”. The capacity for manning and equipping air evacuation must be strengthened accordingly. Furthermore, the Armed Forces should strengthen the ability to treat and move a large number of patients via advance requisitioning of infrastructure and equipment in selected areas. To support the entire treatment and evacuation chain, it is recommended to establish a dedicated company to ensure supplementary supply of medicines, medical consumables and blood products, starting from central storage sites.

Attacks with chemical, biological, radiological and nuclear weapons (CBRN) are challenging to manage. The war in Ukraine has once again brought the use of nuclear weapons to the fore, with reduced respect for conventions, arms control and non-proliferation. Warfare at nuclear power plants shows that the risk of unintended incidents has increased. The Chief of Defence therefore recommends further strengthening of CBRN defence beyond what was decided in the current long-term plan. Sweden and Finland’s NATO membership will pave the way for closer Nordic cooperation on CBRN defence, for example cooperation on courses, exercises and procurement of equipment.
Continuous coverage of the High North requires two satellites in high elliptical orbit over the North Pole.

Satellites used for surveillance, navigation and global secure communications.

Launch facilities for satellites.

Ground segment.
The cyber domain
Due to rapid technological development and digitalisation, ICT is now a precondition for, rather than mainly facilitating for joint operations. The Armed Forces need to augment the organisation’s expertise in the ICT area in order to support the Armed Forces' operational processes and operations, such as targeting. This modernisation will also facilitate effective exploitation and protection of the cyber domain and digital value chains.

The redundancy and capacity of communication systems are being increased in order to make the best possible use of new technology. In particular, the Armed Forces must increase their satellite communications capacity, and 5G should be introduced as a supplementary communication carrier. To increase the rapid response capacity and mobility of the Armed Forces units, the Chief of Defence recommends increasing the capacity within mobile and deployable ICT.

The Chief of Defence recommends establishing more connection points to NATO’s network structure, in order to ensure sufficient redundancy in the link with NATO and to increase the capacity to support operations outside Norway.

The space domain
The space domain will become increasingly important for the Armed Forces. The Armed Forces' capability for operations in the space domain must be strengthened, and the Chief of Defence recommends further developing and strengthening the ability to plan, execute and coordinate operations in space.

The Chief of Defence recommends investing further in space-based surveillance capabilities. This initiative would increase situational awareness throughout Norway’s area of interest, in all situations, and facilitate effective methodical target engagement, among other things. The Armed Forces must have the ability to understand the situation in space, also in cooperation with civilian authorities and international partners. The defence sector must focus on the development, procurement and maintenance of satellite constellations with different sensor configurations. Secure and resilient ground infrastructure that is interoperable with our Allies and partners is critical and must be further developed.

The Armed Forces depend on a space-based ICT infrastructure for secure and efficient communication. The Armed Forces must continue to invest in efforts to establish secure broadband coverage in the High North, in cooperation with commercial operators and international military partners. There is also a growing need for access to satellite constellations that enable secure global communication. The ground infrastructure in this area should be further developed, and the Chief of Defence recommends establishing alternative anchoring capacity for satellite communications.

International space activities are characterised by technology that weighs less and less and is becoming less expensive. There is thus a lot of pressure for satellite launching infrastructure, and the Armed Forces must maintain access to secure launch infrastructure, primarily in cooperation with close Allies.

The land domain
To strengthen the Armed Forces’ ability to conduct land operations, the Chief of Defence recommends that the Army be organised with an Army Headquarters capable of leading national and Allied land operations, two brigades, Finnmark Land Command, three regiments (today’s Armed Forces’ Military Police Department, the
Intelligence Battalion and the Logistics Regiment, respectively) and the Land Warfare School. The future strengthening of the Army have units which is partially based on mobilization.

The Chief of Defence further recommends to establish an additional brigade. The brigade will give the Armed Forces increased resilience and firepower, as well as tactical and operational freedom. The brigade will be based on armoured wheeled vehicles, to ensure mobility over longer distances. The brigade must be based on the potential we have in the reserve structure and be based on mobilization. The unit should be set up in south east Norway, to ensure a presence in both the north and south of Norway.

The defence of our northernmost region should be further strengthened within the framework of the Finnmark land command. The Chief of Defence recommends establishing an ISTAR capacity, engineering resources and one light infantry battalion with coastal mobility (amphibious). The light infantry battalion will be based partly on mobilization. The Finnmark land command will thereby constitute a tactical system on brigade level, which contributes to increased presence and operational capability in the High North, and with new capability for operations in coastal areas.

The mission and tasks of the Home Guard have increased. The Home Guard’s ability to plan and lead territorial operations at district level is recommended to be strengthened, together with the ability to adopt new technologies such as unmanned systems and countermeasures against drones. The Home Guard should also gain an increased ability to secure infrastructure with a sea front, as well as more vehicles in order to increase the territorial structure’s mobility. In addition, there will be the establishment of a Home Guard task force in Tromsø. In Troms and Finnmark, the forces should have an increased anti-armour capability. The Chief of Defence recommends strengthening the territorial structure with at least one position with a fixed monthly remuneration, in support of the local Home guard commanders.

The Home Guard’s territorial areas of responsibility should be consistent with other total defence actors, primarily the police and the county governor, as is the case in for example Trøndelag.

The development in the land domain must include simulators and training facilities. The initiative will contribute to streamlining and increasing the quality of education, training and instruction of personnel and units. Simulators will provide environmental benefits through reduced use of ammunition, fuel, and by reducing impacts on nature and the environment.

The land forces’ logistics units are under-dimensioned. The Chief of Defence recommends increasing the fuel transport capacity and the procurement of mobile tank facilities to support own and Allied operations. To increase the capacity to transfer heavy equipment, the Armed Forces should renew and increase the Army’s heavy transport capacity. Moreover, new capacity should be procured for the rail transport of own and Allied forces. In view of NATO’s expansion in the north, this resource should be viewed in a Nordic framework.

Finally, the Chief of Defence recommends acquiring mobile land-based anti-ship missiles, to increase the capability of sea denial across all domains.

The maritime domain

The Chief of Defence recommends the scalable renewal of both the Navy’s and the Coast Guard’s vessel structure, which also entails a volume increase in the maritime domain, as described under the maritime surface structure focus area. The increase will contribute an enhanced presence, the ability to solve parallel assignments, and operational availability.

Given the economic scope for manoeuvre, the Chief of Defence recommends increasing the
Security in uncertain times

Scalable strengthening

The Armed Forces must exploit the potential of unmanned systems in the maritime domain. Over time, the Navy has gained experience in the use of unmanned systems for mine countermeasures, and is in the process of further developing the concept, with greater use of unmanned platforms to take over tasks currently performed by manned platforms. The Chief of Defence recommends following and contributing to developments within unmanned systems in the maritime domain and assessing the introduction of new systems as the technology matures and becomes available. Future vessels, such as the proposed standard vessels, will be equipped to carry unmanned systems that can add new capabilities and increased capacity.

Unmanned vessels are well suited for acquisition and mapping both on the surface and below the sea. The Chief of Defence therefore recommends that further development of unmanned systems for use by the vessels and for the Kystjegerkommandoen (Norwegian Coastal Ranger Commando) be facilitated. In order to benefit from the increased data volume, when unmanned systems are procured the Armed Forces must also assess the need for analytical capacity.

Over time, the maritime industry has developed and operated unmanned systems for commercial use, particularly in the offshore industry. At the same time, relevant Allied nations are also contributing to this development. The Armed Forces should cooperate with civilian industry and Allies wherever possible, to benefit from existing knowledge and experience.

The air domain

To ensure effective command and control in all phases, the Chief of Defence recommends that the National Air Operations Centre be developed so as to be able to lead both national and Allied air operations in a joint operational framework, in crisis and in war. After 2025, the Chief of Defence recommends consolidating the leadership of national air operations at one number of submarines from four to six. An increase from four to six submarines takes higher priority than an increase from four to six frigates. An increased number of submarines will double the operational availability. Submarines are difficult to detect in submerged state, and in the short and medium term, no technology has been identified that will challenge this. This strengthening will increase the Armed Forces’ ability to deny an adversary freedom of operation and increase the ability to combat an adversary’s maritime forces.

The Chief of Defence accordingly recommends restoring the ability to lay sea mines from surface vessels, aircraft and submarines. Sea mines are a cost-effective tool that contributes to protection in the maritime domain. In addition to the acquisition of the mines and the establishment of a centre of expertise, these are capabilities that do not require significant investments, because existing aircraft and vessels can be used to lay the actual mines.

It has been decided to introduce a new mine countermeasure system, but there is a need to strengthen the approved investment framework. Further development and the potential for a rapid volume increase must be realised within the framework of civil/military cooperation. Standard vessels are intended to be able to support and guide the system, but it must also be able to operate with the support of civilian vessels and from land.

The Armed Forces should strengthen the Kystjegerkommandoen (Norwegian Coastal Ranger Commando) as a maritime ISTAR unit with unmanned sensors and effectors. This strengthening will increase the Armed Forces’ ability to build situational awareness and deliver target data for long-range weapon systems.

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Security in uncertain times

FMR 2023 FMR 2023

Scalable strengthening

not allow for two helicopter variants, the Armed Forces should procure one helicopter type that can meet the needs of both the special forces and other parties. Within helicopters in general, the following order of priority is recommended: Anti-submarine helicopters, helicopters adapted for special forces operations and medium-duty transport helicopters.

Situational awareness and the ability to respond rapidly in Norwegian areas of interest depend on an effective chain of air surveillance radars. To ensure sufficient coverage, the Chief of Defence recommends replacing another three Sindre II radars with a new type, in addition to the eight that have already been approved, primarily by triggering the existing option. The Armed Forces should also invest in a passive air surveillance system that can increase the Armed Forces’ ability to detect and identify airborne targets.

The stationary air surveillance radar chain is vulnerable to attack. To compensate for loss of coverage, the Chief of Defence recommends that, within the framework of NATO cooperation, and preferably together with our Nordic neighbours, Norway contributes to ensuring that there is sufficient capacity for early airborne warning, and command and control.

The Chief of Defence recommends acquiring a full system simulator for the P-8 at Evenes. This will provide significant gains through increased operational capability and availability, as well as major sustainability gains in the form of reduced personnel requirements, financial savings and reduced emissions.

The Armed Forces should facilitate the increased availability of aerial tanker aircraft. This will make the Armed Forces’ combat aircraft more effective because they will then be able to stay in the air longer without having to land to refuel. If a platform that can also be used for transport is chosen, this can help increase the Armed Forces’ capacity for support, mobility and medical evacuation. The Armed Forces should also work towards the National Air Operations Centre being interoperable with NATO and dimensioned to be able to assume regional leadership responsibility for Allied air operations. This must be seen in the context of the possibility of establishing a joint Nordic or Arctic air command.

The Chief of Defence recommends facilitating more efficient operation of the Air Force’s air wings and air bases. Air bases must be strengthened as a combat structure, and units and functions central to the operation of the air bases should be subordinated to the Air Force. As one of the Air Force’s most central air bases, responsibility for base operations at Evenes Air Base should be transferred from AVINOR to the Air Force, to ensure military control in crisis and in war.

To exploit the joint operational potential of the F-35, the Chief of Defence recommends strengthening technical and ICT support of the combat aircraft system. Solutions and arrangement of technical support and maintenance should look towards civil-military cooperation in both national and international contexts, which also applies to the P-8 and new helicopter capabilities.

The Chief of Defence recommends that the further development of the Armed Forces’ helicopter fleet be assessed holistically and be based on one helicopter family. This means that future procurement of anti-submarine helicopters, special forces helicopters and transport helicopters must emphasise cost-effective training, procurement and operation. The acquisition of anti-submarine helicopters for the Armed Forces’ frigates should be viewed in the context of the Navy’s future maritime surface structure. As an alternative to helicopters, an unmanned system may be considered if the technology is mature at the time that the frigates are introduced. As a main alternative, the Armed Forces should procure helicopters adapted to special forces operations in addition to medium-sized transport helicopters. If the financial situation does not allow for two helicopter variants, the Armed Forces should procure one helicopter type that can meet the needs of both the special forces and other parties. Within helicopters in general, the following order of priority is recommended: Anti-submarine helicopters, helicopters adapted for special forces operations and medium-duty transport helicopters.

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The stationary air surveillance radar chain is vulnerable to attack. To compensate for loss of coverage, the Chief of Defence recommends that, within the framework of NATO cooperation, and preferably together with our Nordic neighbours, Norway contributes to ensuring that there is sufficient capacity for early airborne warning, and command and control.

The Chief of Defence recommends acquiring a full system simulator for the P-8 at Evenes. This will provide significant gains through increased operational capability and availability, as well as major sustainability gains in the form of reduced personnel requirements, financial savings and reduced emissions.

The Armed Forces should facilitate the increased availability of aerial tanker aircraft. This will make the Armed Forces’ combat aircraft more effective because they will then be able to stay in the air longer without having to land to refuel. If a platform that can also be used for transport is chosen, this can help increase the Armed Forces’ capacity for support, mobility and medical evacuation. The Armed Forces

"The Chief of Defence recommends a development path that is consistent with the following focus areas:

- Eliminate weaknesses in the current structure
- Maritime surface structure
- Air defence
- Long-range precision weapons
- Increase the volume of the Armed Forces"
should explore the possibility of either increasing the framework within existing multinational cooperation arenas, or procuring a dedicated aerial tanker capacity in cooperation with, for example, our Nordic neighbours.

To increase the Armed Forces’ rapid response capacity and mobility, the Chief of Defence recommends acquiring two additional Hercules transport aircraft. Increasing the fleet from four to six would double the average operational availability from two to four.

Unmanned aerial systems
The Norwegian territory and exclusive economic zone extends over very large areas. This requires the Armed Forces to be able to collect, operate and ensure a presence over great distances, often with short reaction times and for prolonged periods. In addition, developments within modern air defence systems make it more demanding and risky to conduct air operations in the vicinity of an adversary’s forces. Unmanned aerial systems with and without weapons can help address some of these challenges. In addition, experience from recent wars shows that such systems are cost-effective and flexible tools that can contribute with a number of effects. By using a large number of simple and inexpensive systems, one can, for example, accept a higher loss rate and thereby take greater operational risks.

The Chief of Defence recommends a comprehensive approach to the procurement of unmanned aerial systems across branches and services. The defence sector must also strengthen its knowledge of this area. Procurement of unmanned aerial systems must take account of the rapid technological development whereby systems quickly become outdated. The Armed Forces must also monitor the development of new concepts and applications closely, such as the interaction between unmanned and manned systems, swarm technology and the use of unmanned systems in support functions such as air-to-air refuelling and transport. Based on experience from Ukraine, it is natural to strengthen the Armed Forces’ capacity within unit level systems that may also be armed, to include the defence against such systems. The Armed Forces should exploit the potential of unmanned aerial systems throughout the structure.

The Chief of Defence recommends strengthening the capacity within both tactical and unit level unmanned aerial systems, in order to have sufficient sensor coverage at the tactical level. Some of these systems are consumables in armed conflict and should therefore be inexpensive and easy to replace.

The Chief of Defence recommends acquiring a larger unmanned aerial system that can be used for a wide range of tasks throughout Norway’s area of interest, including as a weapons platform. The system must be able to operate in civilian airspace and in an Arctic climate. The procurement should be conducted as part of a multinational framework, based on leasing rather than purchasing the equipment, and contracting civil technical services and maintenance wherever possible. As a first step, the Armed Forces should lease a smaller number, for example two platforms, with an option to expand to more platforms over time. The responsibility for operational planning and management of the system must be assigned to the National Air Operations Centre, but must be staffed with personnel from relevant branches of the Norwegian Armed Forces, to ensure that joint perspectives and priorities are ensured. Flight operations and technical support are recommended to be located at Andøya.

To strengthen the defence capability against unmanned aerial systems, the Chief of Defence recommends working systematically to develop a robust defence against unmanned systems, as part of the integrated air defence system.
Unmanned systems can support and supplement manned platforms and soldiers in all domains, and in more and more new ways. The systems are particularly useful to handle tasks that are repetitive or dangerous, or that might expose personnel to inappropriate risk.

Until now, it has been most common to equip systems with sensors, but other equipment and new areas of use are becoming more and more prevalent. Examples are systems used as weapons platforms, for logistics support, as communication nodes or for air-to-air refuelling.

Unmanned systems come in many sizes, with different prices, performance capabilities and features. They range in size from the smallest weighing a few dozen grammes, to the largest that are equivalent to manned platforms. The distinction between unmanned systems and modern weapons can sometimes be fluid, which can lead to grey zones in terms of classification and regulations.

Planning and operations with unmanned systems are to a great extent based on human involvement. However, new technology such as artificial intelligence will provide for greater autonomy and new opportunities that can increase the system’s effect.

We can expect significant developments within unmanned systems in the coming decades in such areas as autonomy, weapons use, communications, propulsion systems and on-board energy solutions.

This development opens up new opportunities, operational concepts and types of cooperation, such as:

- Autonomous interaction between unmanned systems (e.g. drone swarms)
- Integrated interaction between manned and unmanned systems (manned-unmanned teaming).
Chapter 9

The Chief of Defence's other recommendations

In addition to advising on scalable measures that provide various development directions, the Chief of Defence was asked to provide advice related to several specific matters. The following section covers advice that is either independent of the various development directions, is not directly related to the structure, or is of such central importance that it must be given special weight.

**Personnel and expertise**

Today, the Armed Forces face shortcomings in terms of personnel and competence. The shortcomings will result in significant challenges by 2028, if no measures are taken. Among other things, the Armed Forces may face challenges with regard to realising the potential of costly investments, while the ability to further develop the Armed Forces and phase in important new capabilities may be reduced.

High labour market mobility and competition with the civilian sector affect the Armed Forces’ ability to retain and recruit personnel. Unemployment is at a historically low level and more opportunities are open to individual employees. At the same time, younger generations move on to new jobs more frequently, and fewer and fewer settle in rural areas, which has an impact on a sector with a high proportion of jobs outside major population centres and which is dependent on a relatively young workforce, compared to other activities.

Today, many of the Armed Forces’ employees leave well before they reach retirement age. Advertised positions at all levels currently lack applicants. The vacancies lead to greater use of temporary arrangements and temporarily higher ranks. The challenge is exacerbated by the fact that the Armed Forces’ educational capacity does not meet current and future needs.

The Armed Forces’ age structure for military employees is out of balance, with a preponderance of personnel over the age of 45 and a shortfall of personnel aged below 45. Some of
Fig. 12

Imbalanced age structure

- Adjust age limit for military personnel
- Re-hire
- Increase quotas at school houses

1. Increase quotas at school houses
2. Re-hire
3. Adjust age limit for military personnel
the imbalance is due to the fact that the education reform and the Armed Forces’ reorganisation of the personnel structure have not had their full effect. Irrespective of the reforms, a large group of employees will soon reach retirement age. If no action is taken, the Armed Forces will not be able to adequately replace those who resign, neither in volume nor competence terms. The gap may lead to a lower level of experience in the higher echelons of the Armed Forces in the future.

The Chief of Defence recommends that the defence sector makes long-term investments in personnel and competence, and takes swift action to rectify the situation. Demographic trends and technological developments must be emphasised in this work.

The Armed Forces must be an attractive workplace that recruits, develops and retains expertise on a sound basis over time. The Chief of Defence recommends establishing a life phase policy whereby incentives can be adapted to the individual’s life phase. In addition, the Armed Forces must offer officers, non-commissioned officers, specialists and civilian employees good and clear development and career opportunities. Armed Forces personnel are interested in pension terms and retirement age, and a clear and predictable framework for these should be established. Adjustment of the special age limit might also contribute to curbing the effect of the pension wave.

The Armed Forces must assess how a wide range of incentives can help retain personnel for longer. In addition to salary, incentives might consist of commuter schemes, investment in housing and neighbourhoods, flexible working hours, or flexible solutions for remote and home offices. A differentiated, competitive salary system should be developed, while rectifying the system’s imbalances between different positions, to avoid internal competition in the sector. In this context, the Chief of Defence refers to the ongoing salary and incentive project headed by the Norwegian Ministry of Defence.

Civilian experience must be valued more highly, to facilitate the re-appointment of former military employees. In this context, the Armed Forces must develop and communicate a clear model for assessment of prior competence. Similarly, the Armed Forces should be permitted to employ personnel with relevant civilian expertise in certain military positions at different rank levels, provided that the necessary basic military training has been completed. Appointment processes must be rapid, so that candidates do not select other job offers before the appointment process has been completed.

The Armed Forces are a diverse organisation that needs high-level and, in many cases, specialised expertise. The need for development and innovation requires the readiness for change as a competence. The Armed Forces’ core competence consists of basic military skills, as well as the competence to plan, lead and conduct military operations. At the same time, the Armed Forces manage substantial assets. Corporate governance and corporate development competence must also be emphasised, to ensure that the organisation manages its responsibilities in a good and efficient way. Furthermore, the technological and mercantile development also sets competence requirements. The Armed Forces rely on good, data-driven analyses to facilitate the long-term mapping and planning of their own competence production and recruitment of acquired civilian expertise.

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A scalable approach to increase the number of personnel

The graph shows a scalable increase in the number of personnel required to meet the proposed plan to strengthen the Armed Forces. The upper line shows a trajectory where all proposed focus areas are realized, while the lower line shows the trajectory of the current plan. The actual growth will depend on the decided ambition within the focus areas.

The Armed Forces also see a connection between functional vacancies and the Armed Forces’ reputation as an employer, both internally and externally. A structure with adequate staffing levels will help reduce workloads, increase predictability, improve well-being and contribute to a lower risk of adverse incidents.

The Chief of Defence will give priority to targeted work on the Armed Forces’ employer profile, whereby citizen, relationship and employee surveys are used actively.

The recommended strengthening of the structure will require significantly more employees than today. Even if measures are taken, a high rate of attrition due to age is likely to cause the Armed Forces’ personnel stock to decline by 2028. The measures can nevertheless help reduce the gap and improve the situation. There is still time and opportunity to make adjustments to competence production and to further develop the good and effective necessary measures in the period after 2028. The Chief of Defence therefore considers it possible to achieve the strengthening outlined in the advice, but this requires immediate action.

Education and training

The Armed Forces’ training and education system has undergone several major changes. To ensure predictability, the Chief of Defence recommends developing existing models, rather than new restructuring. FHS (the Norwegian National Defence College) should be further developed as an accredited university college. Relevance surveys under the auspices of the university college should form the basis for the further development of programmes and courses at our educational institutions.

The Armed Forces are unique in the respect that to a great extent the organisation itself provides qualifying-level education and vocational education. The Armed Forces are therefore vulnerable to personnel turnover. The Chief of Defence assesses that there is a need for an immediate increase in the current education quotas. The increase must take place in line with real estate and teaching capacity.

Increased education quotas in the Armed Forces will not resolve the challenges alone, and the opportunities inherent in the civilian education system must be better utilised. The Chief of Defence wishes to continue its targeted recruitment of personnel with acquired civilian expertise, with the opportunity to add military qualifications as required.

Opportunities for lifelong learning and development can help retain personnel longer. The Chief of Defence recommends giving priority to incentives that facilitate competence enhancement. For example, provision should be made for military or civilian graduate studies at an earlier career stage.

Training and education institutions must be strengthened to meet the needs of vocational and functional education programmes. The Armed Forces are conducting an ongoing study to consider the organisation of vocational and functional education programmes, including the organisation of the various weapon schools. The study will not be completed before this advice is submitted. The purpose of the study is to ensure a quality-based and cost-effective vocational and functional education programme.

Conscription

The Chief of Defence will continue the joint recruitment and education programme for the Armed Forces. In this way, the Armed Forces will ensure that basic training in military skills and values is uniform and independent of service. The Armed Forces should facilitate differentiated lengths of conscription and flexibility in the number of admissions per year, in order to meet the needs of the Armed Forces and contribute to reduced costs, greater flexibility, reduced reaction time and increased endurance.

The transition to basic training of recruits outside the operational units has a higher cost than initially estimated. The Chief of Defence still
considers joint training of recruits at Madla and Terningmoen to be the best solution. Training of recruits and soldiers outside operational units increases operational capability and provides better defence capability opportunities at time of crisis and war. Adjustment of contingents and differentiated lengths of service might reduce the volume during any transitional period until sufficient capacity at the basic training schools are in place.

The Armed Forces must exploit the potential inherent in reservists. In addition to the benefits of increasing the personnel intake, former service members should be recruited back into the Armed Forces to a greater extent. In addition, non-permanent personnel should be able to register an interest in serving in the Armed Forces for shorter periods. The Chief of Defence recommends that a system be facilitated to enable this in an effective manner.

The recommended strengthening is based to a great extent on exploiting the opportunities inherent in the conscription system. The manning within some structures is therefore based on reserve personnel.

Work on digital solutions for more effective contact between the Armed Forces and conscripts must be continued and strengthened. The solutions can be used to offer courses, education and follow-up throughout all stages of conscription. To increase society’s resilience and willingness to defend the population, e-learning courses in relevant topics can, for example, be offered to all conscripts in connection with conscription, regardless of further service.

**Real estate and infrastructure**

The status of the Armed Forces’ real estate and infrastructure has shown negative development for some years, as a consequence of continuous underfunding. The status rating is marginal in several places, and some elements of the real estate portfolio have fallen to a very low status level. In the short term, the situation may lead to an unintended decrease in operations tempo, restrictions on use and closure of buildings. The poor condition also increases the need for proactive maintenance, rather than a more cost-effective and long-term approach, with status-based and planned maintenance.

The Chief of Defence recommends giving priority to measures that contribute to achieving the necessary real estate and infrastructure related to the approved structure. As an element of this, maintenance and upgrading of existing real estate and infrastructure should be emphasised. Priority should be given to ensuring satisfactory living and working conditions for personnel, followed by preservation of assets, which is crucial for the Armed Forces’ operational capabilities, including receiving Allied reinforcements. At the same time, firing and training areas must be further developed to meet new needs.

Today, the residual potential for available real estate and infrastructure has generally been utilised. Some vacant real estate and infrastructure is available in the overall real estate portfolio, but not in the parts of the country where there is the greatest need. The remaining potential that can be realised through, for example, more efficient use of areas, cannot be realised until investment limits for renewal of the building stock are available.

Several of the Armed Forces’ bases have no room for any increase in real estate without investment in subterranean infrastructure. In order for the Armed Forces to grow, streamlining of the real estate and infrastructure portfolio must be geared towards streamlining existing bases, with increased functionality and efficient use of areas. New workplace concepts and the use of technology can also contribute to improvement and greater efficiency.

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**The bases of the Armed Forces**

![Fig. 14 The bases of the Armed Forces](image-url)
What does a soldier need?

- Offices
- Mess halls
- Barracks
- Education facilities

Følgerekvenser for annen EBA og viktige grensesnitt

- Infirmary
- Storage
- Sports facilities
- Firing-and training ranges
- Religious practice
- Welfare

What does an aircraft need?

- Runways and taxiways
- Aprons
- Hangars and shelters
- Maintenance
- Ammunition
- Communications
- Perimeter security
- Fuelling facilities
- Utilities (power, water)
- Tactical command and control
- Personnel related infrastructure
- Runway support
- Crash, fire and rescue

Source: The Norwegian Defence Estates Agency
Security in uncertain times

Other recommendations

Provision of standardised real estate and infrastructure, without the need for significant clarifications from the Armed Forces. The defence sector should exploit the opportunities inherent in NATO’s infrastructure programme for facilities available for Allied use.

Renewal of existing capacities and introduction of new capacities must also be planned and implemented holistically. Real estate and infrastructure is traditionally the input factor with the longest lifespan. At the same time, real estate and infrastructure must be in place at an early stage on the introduction of new equipment or personnel increases. The long service life often entails a need for adjustments when new equipment or more personnel are to be added.

The Armed Forces’ real estate and infrastructure must meet existing and future sustainability requirements. The Armed Forces must make use of new technology that contributes to more environmentally friendly construction processes. In addition, sustainable procurement of real estate and infrastructure and equipment is central to the transition to a circular economy. Sustainability must therefore be assessed on an equal footing with time, costs and performance in competitions, and specific and ambitious climate and environmental requirements must be set. The solutions must be assessed in a future-oriented life cycle perspective, while balancing the need for simpler solutions and greater standardisation.

Specific real estate and infrastructure advice

In Report to the Storting No. 10 (2021–2022), the Norwegian Government decided to continue with Andøya as a base for Allied activities. Andøya is partly financed through NATO funds and is important for NATO’s operations in the High North, both in peace, crisis and war. The Chief of Defence therefore recommends caution related to the disposal of operational infrastructure. The scope for financing the renewal of infrastructure on Andøya via NATO must be exploited.

The renewal of the real estate portfolio must be given priority in the investment budget. The current rental model does not function well and should be revised, including assessment of whether funds for asset preservation should be routed directly to the manager of the real estate and infrastructure. Renewal measures should be included as part of the manager’s financial scope for manoeuvre, rather than being fully linked to the investment process. The Norwegian Defence Estates Agency should be responsible for projects that primarily involve renewal and provision of standardised real estate and infrastructure, without the need for significant clarifications from the Armed Forces. The defence sector should exploit the opportunities inherent in NATO’s infrastructure programme for facilities available for Allied use.

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In Proposition 151 S (2016–2020), it was decided to move the Air Force Training Centre from Kjevik to Værnes, in order to gather all Air Force training activities in the Trøndelag region. The Chief of Defence supports this decision.

Proposition 14 S (2020–2021) assumes an increase in the number of conscripts entering initial service and a joint basic training school. The approved financial framework for the establishment of a joint basic training school is not sufficient. If the economic trajectory is continued as today or reduced, the Chief of Defence recommends cancelling the plan to establish a joint basic training school at Tenningmoen. If the financial framework is increased, the Chief of Defence recommends proceeding with this establishment according to the intentions of the current plan.

Proposition 14 S (2021–2021) outlines a strengthening of the Army and associated support functions in Inner Trøms. Studies have shown that the budget framework allocated is too optimistic. The Chief of Defence recommends increasing the financial framework for the strengthening and that the necessary real estate and infrastructure be established according to a comprehensive plan.

The Chief of Defence recommends a comprehensive plan for the development of real estate and infrastructure in the Trøndelag region. The Chief of Defence recommends that the necessary real estate and infrastructure be established according to a comprehensive plan.

The termination of the Armed Forces' activities beyond the rescue helicopter service and critical emergency infrastructure at Bodø Air Base creates a need for a new real estate and infrastructure for the functions that move out of the base. The Bodin base is central to solving this challenge. Even though the base is characterised by old and partly dilapidated buildings, there is good potential for further development of the base area. Decisions and measures must be closely synchronised with AVINOR’s “new city – new airport” process. The Chief of Defence recommends that a financial framework be allocated to handle the relocation of the Bodø Air Base.

The current long-term plan assumes an increase and strengthening of several functions associated with the headquarters at Reitan. To handle this increase, office facilities and other relevant real estate and infrastructure should be established at Reitan. The Chief of Defence does not require all office facilities to be located in the mountain bunker facility.

According to the plan, the National Logistics Operations Centre (NLOGS) will be moved to Sessvollmoen when Kjeller closes down. NLOGS will be further developed as a management element to ensure national operational management of logistics functions at the tactical level. The centre could also provide the framework for a NATO Joint Logistics Support Group headquarters. The Chief of Defence recommends moving the Norwegian Defence Logistics Organisation staff to the same location, in order to combine specialist communities and strengthen the ability to manage logistics in the Armed Forces.

When NLOGS has to leave Kjeller, arrangements should be made for temporary establishment in Eastern Norway, until Sessvollmoen is ready.

HV-02 must be moved as a consequence of the progress plan for the development of the Lutvann base. In line with previous recommendations, the Chief of Defence recommends facilitating the establishment of HV-02 at Linderud base. This measure must be seen in the context of the need for an increase at the Norwegian Military Academy.

The defence sector currently has a number of locations in the Oslo area, with a mix of leased and owned areas and with varying development potential. The Norwegian Defence Estates Agency has conducted an initial survey of development needs and opportunities in the area, indicating that there may be scope for efficiency improvements and savings. The Chief of Defence recommends that a comprehensive plan be implemented for the development of real estate and infrastructure in the Oslo area. The plan must emphasise efficient use of the area, with flexible and future-oriented solutions that help strengthen the Armed Forces as an attractive workplace.

The Chief of Defence recommends a comprehensive plan for the development of real estate and infrastructure in the Oslo area. The plan must emphasise efficient use of the area, with flexible and future-oriented solutions that help strengthen the Armed Forces as an attractive workplace.
In uncertain times, the Armed Forces should ensure access to fuel within the total defence capability targets. The Armed Forces must also be prepared for vital munitions (BDM), in line with NATO capability, spare parts for critical systems and personal plenishing the Armed Forces' stocks of ammunition.

Equipment and logistics
Today's stocks of important equipment and supplies in the Armed Forces are both imbalanced and inadequate. The Armed Forces must improve the equipment situation, strengthen the security of supply, and increase standardisation, to ensure a rapid response capacity and endurance.

Emergency response organisations such as the Armed Forces cannot rely on small stockpiles to which suppliers are added as the need arises. Stocks of important equipment and supplies must be large enough to handle demanding situations over time, and when the possibility of new supplies may be uncertain. The Armed Forces must establish a better balance in stocks of equipment through a combination of their own inventories, strategic agreements, continuous exploitation of equipment throughout its lifetime.

The Armed Forces do not have the capacity to support their own forces alone in wartime. The Chief of Defence recommends exploiting the potential of civil-military cooperation, so that the Armed Forces can be more oriented towards their core activities. Within the total defence framework, the Armed Forces' operations must be supported by an efficient, flexible and scalable system in which both military and civilian resources mutually reinforce each other and ensure the Armed Forces access to goods and services in the most challenging situations.

In vital areas, security of supply and emergency preparedness must be under the control of the defence sector. Where the needs of the Armed Forces and society in general are aligned, it may be appropriate and cost-effective to rely on logistics and maintenance solutions together with civilian suppliers, contingency partners and total defence actors. The Armed Forces must continuously exploit the opportunities offered by multinational logistics cooperation, both within NATO and via bilateral agreements with Finland and Sweden, for example.

The Armed Forces face challenges in maintaining certain types of equipment. It is necessary to streamline roles, responsibilities and authority, so that the necessary framework conditions are in place to make maintenance more efficient. Furthermore, the pace of technological development requires frequent upgrading of equipment in order for it to be operationally relevant and maintainable. This requires financial predictability and long-term agreements with suppliers. The Chief of Defence recommends facilitating more incremental development of equipment throughout its lifetime.

The Armed Forces must work to reduce the range of variants and emphasise standardisation and variant limitations in future procurement of equipment. Greater cooperation with Allies concerning standardised procurement will provide financial benefits and may contribute to more efficient operations. Standardisation between nations will facilitate possible interchangeability across operations and thereby greater resilience. Standardisation, a reduced range of variants and cooperation with the civilian sector will also contribute to streamlining the Armed Forces' maintenance of equipment.

The defence sector should have the opportunity to make greater use of the Armed Forces' requisition system. The system will strengthen the Armed Forces' emergency preparedness by making it possible to requisition civilian equipment and buildings.

A process has been initiated to clarify roles, responsibilities and authority regarding the organisation of logistics in the defence sector. The work will facilitate modernisation and digitalisation of the logistics value chain, and has, among other things, entailed a proposed change in the warehouse structure, to improve the management of equipment flows to and within the Armed Forces. The Chief of Defence acknowledges that the sector's logistics apparatus is technologically immature, with too little digitalisation, outdated warehouse technology and a lack of system integration with suppliers. The Chief of Defence recommends investing in a future-oriented and more cost-effective supply service through adapted and newly established real estate, infrastructure, and technology for improved equipment management.

Climate and environment
Climate change probably poses the greatest challenge of our generation. The Armed Forces must therefore take their share of the responsibility and help Norway achieve its climate and environmental goals. The defence sector has drawn up a climate and environmental strategy that supports the UN Sustainable Development Goals and describes the sector's priority action areas and ambitions, as well as an action plan.

The climate and environmental strategy describes how the sector will cooperate and organise the climate and environmental work, and how the Armed Forces will report on progress and achievement of the goals. According to the strategy, the Armed Forces' overall objectives for climate and environment are that:

- The defence sector reduces its total climate footprint and negative environmental impact, and contributes to a sustainable society, both nationally and internationally.
- The defence sector is prepared and adapted to climate change.

The action plan is an extension of the climate and environmental strategy, and specifies how the sector will achieve the overall goals set in the strategy.

Climate change is happening at a rapid pace and, which may require an adaptation strategy for the Armed Forces. The defender will therefore take several measures over the next five years and work systematically to reduce its climate footprint. Reducing the total climate footprint must be seen in the context of the size of the structure, as a larger structure will naturally have a bigger footprint.

The Armed Forces must also be prepared to operate in a more demanding climatic environment, which may require an impact on technology development, equipment procurement, education, training and exercises, as well as operational patterns. Efforts to reduce greenhouse gas emissions also lead to the development of new technology, providing opportunities that the Armed Forces must be able to exploit in a military context. A focus on climate and the environment will also help to support other sustainability dimensions, such as economic and social conditions.
Climate change may affect the security situation and the threat picture, and create new problems. The Armed Forces must therefore also be prepared to adapt to the changes arising in the wake of climate change.

The advice below outlines measures to take in the short, medium and long term. The advice is based on the defence sector’s climate and environmental strategy and is intended to help Norway achieve its emission reduction target, while maintaining or strengthening the Armed Forces’ operational capability.

Required status in 10–20 years’ time (long term):
- The defence sector has implemented sustainable new technology that ensures a high level of emergency preparedness and operational capability.
- The defence sector has established a robust energy supply system.
- The defence sector has developed zero-emission camps.
- The Armed Forces have integrated simulators between the operational environments.

Innovation and technology
The development of new technology has a major impact on the Armed Forces’ operations, activities and development. The Armed Forces must facilitate a higher rate of innovation in order to continuously develop and update material and equipment.

The technological development within digitalisation, artificial intelligence, machine learning and big data provide new opportunities that can provide operational benefits, and should therefore be given great weight as technological focus areas. Developments within network architecture are a key challenge and Norway must follow NATO’s commitment to digitalisation of the network infrastructure, to ensure interoperability with the alliance.

The Armed Forces plan to establish an overall leadership-function with responsibility for coordination and prioritisation of digitalization efforts in the Armed Forces, thus helping to better take advantage of new technology faster. The Chief of Defence believes that a clear leadership-focus pertaining to technology and innovation will improve the ability to draw up specific action plans in various technology areas. Strategic development plans linked to the Armed Forces’ most important capabilities must take into account the organisational and incentive structure that will produce them, the capability to operate and further develop the systems.

Required status in 4 years’ time (short term):
- Soldiers and employees in the defence sector have an augmented awareness of what climate change means for our activities and which measures need to be taken to strengthen operational capability, while contributing to emission reductions. This is achieved through awareness-raising work, communication, courses, education, reports, analyses and research.
- The defence sector makes strategic decisions based on data of good quality from the sector’s greenhouse gas accounts and the annual climate budget.
- The defence sector sets relevant environmental requirements in procurement processes, and sustainability is assessed on an equal footing with time, cost and performance in all procurement processes.
- Climate change considerations are implemented in camp plans and taken into account in the planning of exercises and training.

Required status in 5–10 years’ time (medium term):
- The defence sector has begun the implementation of measures to reduce greenhouse gas emissions and a negative environmental footprint, based on knowledge acquired during the preceding four years.

Artificial intelligence and machine learning
Artificial intelligence offers new opportunities for the defence sector. Technology is developing rapidly, and the Armed Forces must monitor this closely in order to exploit the technology’s potential.

Artificial intelligence denotes technology that can perform physical or digital tasks that normally require human intelligence. Artificial intelligence systems are based on the interpretation and processing of structured or unstructured data, in order to learn, adapt and make decisions. Artificial intelligence can process large amounts of data and perform tasks such as image recognition, interpretation of speech and text, and proposal of solutions and courses of action to solve specific problems, as well as controlling vehicles, vessels and aircraft.

The Armed Forces can benefit from artificial intelligence for, among other things, surveillance and intelligence, planning and decision-making processes, streamlining operations, and autonomous management of systems and platforms in all domains. Machine learning is a sub-technology of artificial intelligence. The technology consists of data systems that automatically detect patterns in large amounts of data and make choices based on this, as well as learn to adjust its behaviour over time. Machine learning can for instance be used to manage logistics, personnel and financial systems. The use of artificial intelligence raises several new ethical and legal questions. The Armed Forces’ development and use of this type of technology must therefore be transparent, verifiable, characterised by caution, and adhere to ethical principles and legal frameworks.
Security in uncertain times

Allied forces on winter training in Norway.

Norwegian vessel operating with US carrier strike group.
and the ability to develop relevant concepts for joint operational use.

The Chief of Defence believes that the three-party cooperation between the Armed Forces, the Norwegian Defence Research Establishment and defence industry can be strengthened by establishing an innovation fund for the defence sector. The fund can help close the gap between development, experimentation and procurement, and strengthen the ties between industry and government actors. In addition, the fund will facilitate that innovative technology from small and medium-sized Norwegian enterprises can help meet the needs of the Armed Forces, and speed up the qualification and rollout of promising technological solutions.

The defence sector must give targeted priority to the sector’s research and development (R&D) funds, in cooperation with the Norwegian defence industry, in order to strengthen the three party cooperation. This effort must define what technology we should develop on our own, what we should do in cooperation with close Allies, and what we will exclusively procure based on existing solutions in the market. Concept development and experimentation (CD&E) in the Norwegian Armed Forces must emphasise the development of concepts that can utilise technology in smarter ways. To facilitate this, the Chief of Defence recommends that CD&E and R&D resources in the sector are coordinated more holistically than is the case today. This implies that the Armed Forces’ Joint Headquarters takes on a network leader role for the Armed Forces’ CD&E activities through NOBLE vis-à-vis the Norwegian Defence Research Establishment (FFI) and strengthens the relationship with their innovation efforts such as the centre for innovation, ICEworx. The Armed Forces must take a long-term approach to exploiting technology in new ways and contributing to future-oriented concept development.

To exploit emerging and disruptive technologies, the Armed Forces must find new ways of working. The pace of innovation in civilian industry is high, and traditional procurement processes do not sufficiently take this rapid pace into account. The defence sector must reduce the time from the concept and experimentation stage to procurement and operational use. This development must be in harmony with differentiated procurement regulations that provide for a faster pace. The ecosystem associated with emerging technologies differs from traditional development and procurement. A holistic approach that avoids “locking in” procurement efforts to specific systems or capabilities prematurely will enhance opportunities for course corrections when needed or as opportunities arise. Civilian-military cooperation is in this respect vital.

The Armed Forces must exploit the opportunities within autonomous and unmanned solutions to increase operational capability and create cost-effective solutions. The rapid development of unmanned systems is to a great extent driven by civilian technology development. The Chief of Defence recommends procuring fully developed systems for military use, or adapting civilian-developed systems for military use where possible. The Norwegian Defence Research Establishment’s ICEworx, in close cooperation with the Armed Forces, can contribute to this development.

Norway relies on being able to operate together with its Allies. The Armed Forces’ materiel and equipment must therefore be standardised with NATO and our close Allies to the greatest possible extent.

The Chief of Defence recommends that procurement to a greater extent should be managed in portfolios or programmes that make it possible to coordinate projects and to prioritise across and within them. New technology often cuts across traditional domains such as land, sea or air, and this requires a more holistic approach. At the same time, the current distinction between procurement and operation is less adap-
tive to new technology. By placing responsibility for a technology in a programme arrangement that allows for more coherent management with associated room for prioritization of the allocated finances, a more continuous and incremental development of the technology over time can be facilitated.

Allied cooperation
NATO is a key element of the Norwegian defence concept. The Alliance is based on the principle of a fair sharing of the burden, which means that NATO sets requirements for the nations concerned. The Norwegian Armed Forces’ orientation has a direct impact on NATO’s ability to defend Norway and NATO’s northern flank. The Chief of Defence recommends that the Armed Forces meet NATO’s capability requirements for Norway, including requirements for volume, response time and endurance.

To strengthen Norway’s influence and cooperation with NATO, Norway will contribute with personnel to NATO’s command structure. Norway should prioritise being represented at the NATO Headquarters and Allied Command Operations in Belgium, Allied Command Transformation and the Regional Command for the Atlantic and the High North in the USA. It is also necessary to exert influence on NATO’s other regional commands, tactical commands and NATO’s Support Command in Germany. Norway must also be prepared for the fact that the ongoing expansion of NATO’s command structure will entail increased expectations of Norwegian participation.

The Chief of Defence recommends that Norway stand by the ambition that the Armed Forces Operational Headquarters and the tactical headquarters must be able to operate in close cooperation with NATO’s and close Allies’ command structure, and be prepared to lead Allied forces and operations in our region.

Allied reinforcement forces rely on Norwegian infrastructure. Via the NATO Security Investment Program (NSIP), NATO has invested large amounts in military infrastructure such as air bases, ports, naval bases, ammunition and fuel depots, and command and control infrastructure in Norway. Norway owns the infrastructure, but must maintain and make it available to the alliance as required, until its possible removal from the alliance’s inventory register. The Chief of Defence recommends that the defence sector maintain a close dialogue with NATO on both financing and implementation of improvements and upgrades.

Aviation forces require fixed infrastructure and large areas. The infrastructure at some Norwegian air bases is in need of upgrades to meet NATO’s requirements. The Chief of Defence recommends that the defence sector be dimensioned to receive and support up to three reinforced air wings or helicopter brigades at air bases in Northern and Central Norway. In addition, there are Allied requirements at Sola, Gardermoen and Rygge.

Land forces are less dependent on specially adapted infrastructure, and can use existing airports, ports, railways and road networks during strategic deployments. Land forces can use available civilian accommodation and other infrastructure, and where this is not sufficient, they can in many cases meet their own needs. NATO therefore makes few demands on Norway to make such infrastructure available. The Chief of Defence recommends that Norway be prepared to receive and support at least one Allied division in Norway.

Maritime forces can usually make use of existing ports, shipyards and fuel depots. NATO has nevertheless invested in Norwegian ports, ammunition and fuel stocks, to be able to support operations in the North Sea, the Norwegian Sea and the Barents Sea. However, the capacity to support Allied maritime operations from bases in the High North is marginal.

NATO has invested in command-and-control infrastructure in Norway. The Chief of Defence recommends that all future investments in K2-infrastructure, both at the joint, operational
Sweden and Finland’s membership of NATO

Swedish and Finnish membership of NATO will pave the way for closer Nordic cooperation. Liaison with Finnish and Swedish headquarters has been established and should be continued. Cooperation on courses and expertise should be continued and further developed. In addition to military cooperation, there will be a need for close coordination between the civilian parts of the Nordic countries’ total defence.

The Armed Forces should give weight to closer cooperation between the Nordic countries within the framework of NATO’s Centre of Excellence for Cold Weather Operations located at Elverum. Closer cooperation should entail an increased presence at the centre from all the Nordic countries.

Norway’s importance as a reception area for Allied forces is likely to increase as a consequence of Finland and Sweden’s accession to NATO. The extent will not be clarified until both NATO’s and the USA’s operational plans for this region have been revised. Norway’s capacity for reception of Allied forces must be strengthened and adapted, so that Norway can also act as a transit area for Allied forces that are to proceed to Sweden and Finland. New opportunities must be exploited, such as cooperation on reception and manoeuvres on road axes, and the use of air bases and ports. The capacity for strategic rail transport should be increased in order to be able to move heavy equipment from reception points in Norway and on to Sweden and Finland. This will require involvement and coordination beyond the defence sector in all the Nordic countries.

The allocation of real estate and infrastructure to advance storage capacity for different contingency stocks should be assessed in an overall Nordic framework. The Chief of Defence recommends facilitating easier flows of military goods and services between the countries. A more transparent approach includes access to and utilisation of other countries’ infrastructure, and tactical levels, be viewed from an alliance perspective, to ensure that the Armed Forces can operate on a joint operational basis with Allied forces. The Armed Forces must also facilitate the combined use or combined location of Norwegian and Allied K2 elements and be prepared for NATO to deploy parts of a regional headquarters, with support functions, to Norway.

Norway has a long tradition for arranging major exercises in an allied framework. The Chief of Defence recommends that, within the total defence framework, the Armed Forces be dimensioned to host major exercises. The exercises are normally planned over several years, which makes it possible to acquire the necessary infrastructure and other resources as part of the planning process. In the future, Allied exercises in the High North will to a greater extent be carried out across national borders in the Nordic region. The Chief of Defence recommends facilitating a simplification of the regulations for border crossings.

The costs of exercises are defrayed by the troop contributing nation. The cost level in Norway is high, and this may make it less attractive to participate in exercises in Norway. To reduce the cost level, the defence sector should establish additional permanent or semi-permanent infrastructure for Allies conducting exercises from Norwegian air bases or in connection with Norwegian firing and exercise areas. The infrastructure should be financed in cooperation with key Allies with interests in the region, and opportunities for combined civil and military use should be assessed.

The Armed Forces must be able to contribute to operations outside Norway within the framework of NATO, the UN and coalitions. This will signal strength and unity in the alliance and strengthen Norway’s position as a credible ally. The Chief of Defence recommends that the Armed Forces be dimensioned so that national missions can be solved while up to 20 per cent of the force structure is engaged outside Norway.
simplified border crossings and advance agreements on biological border control.

Cooperation on equipment between the Nordic countries can make the investment and procurement process more efficient. The Nordic countries should agree on standardised equipment types, and the Armed Forces should assess the procurement of equipment within a common Nordic framework, when appropriate, to utilise scale economies. The Chief of Defence recommends that the Armed Forces establish dialogue with the Nordic countries on combined enrolments to NATO’s force structure and in order to view assigned capability targets in a Nordic framework.

Norway should assess cooperation with the Nordic countries on a joint Nordic Total Defence Concept that can flexibly support national and reinforcement forces in the Nordic region. Priority should be given to establishing a Nordic Total Defence Forum to ensure effective coordination of emergency preparedness between the countries. Norway’s role and work related to climate change and climate adjustment within NORDEFCO should be strengthened. The work on research, development and innovation related to robust solutions adapted to a changed climate in the High North should be strengthened.

The development of a logistics headquarters to support a NATO Joint Operational Command should continue, and in the long term be considered for implementation within a Nordic framework. The Armed Forces are also considering Nordic cooperation on a joint regional air tactical command within the NATO framework. This cooperation could result in more effective management and coordination of air operations and thereby greater capacity for combining forces.

Training and exercises

The Armed Forces’ operational capability depends on personnel at all levels being well-trained in everything from basic soldier skills to advanced interaction between units, branches and services within the Norwegian Armed forces, and Allies. The Armed Forces’ training and exercise activity must take place with as small a climate footprint as possible.

Norway is a sought-after country to train and exercise in. Several nations conduct regular exercises in Norway and thus have a presence for longer periods of the year, particularly during the winter season. In addition to military training areas in several parts of the country, Norway is unique in an Allied context in that, under the Requisition Act, it is possible to conduct exercises on civilian land outside the Armed Forces’ exercise areas. Civilian land is used particularly for major exercises and makes it possible for larger units on land, at sea and in the air to conduct combined joint exercises in regions where it is important to demonstrate a Norwegian and an Allied presence. The Chief of Defence recommends that the scheme be managed and preserved on a sound basis.

Swedish and Finnish NATO membership paves the way for closer cooperation between the Nordic countries within training and exercises. It is possible, for example, to establish cooperation on firing ranges, logistics, training infrastructure and planning of exercises. The Chief of Defence recommends working systematically to establish arrangements that facilitate more seamless training and exercises across the Nordic national borders in all domains.

Developments in operational patterns, equipment and weapons indicate that there will be a continued high requirement for firing ranges and exercise areas in the future, but that a lot of new requirements will be imposed on these facilities. Due to the increasing focus on joint operations and training together with Allies, the platform for future exercises must be dimensioned for training on a larger scale in the air, at sea and on land simultaneously. Advanced new weapon systems have special features, very long ranges and is often be interconnected in
Security in uncertain times

Norway must have a national capability to establish comprehensive situational awareness across sectors. All sectors with interest in the area should be included, including non-military commerce and important industries. In particular, the Armed Forces can contribute with comprehensive situational awareness and expertise within analysis, intelligence and information sharing. The cooperation between the petroleum sector, the Norwegian Navy and the Intelligence Service on investigations of gas pipelines illustrates the potential inherent in such forms of cooperation. The Home Guard’s presence throughout the country makes it well suited to detect deviations from the norm in crisis and war, which can help identify and deal with various threats.

The Armed Forces must have the ability to assist civil society in handling incidents and situations. The Armed Forces must also contribute to securing critical national infrastructure and important functions in society. The Chief of Defence recommends a comprehensive approach to securing critical infrastructure, such as reception areas for Allied forces and ICT infrastructure, within the total defence framework.

The Chief of Defence recommends further developing and strengthening the ability to prevent, detect and counteract security-threatening activities. Systematic and comprehensive efforts in this area are important to maintain the ability and function of the Armed Forces in a situation where we are facing complex threats, with vulnerable value chains across and from the sector.

Hybrid threats

Hybrid threats is a term used to describe strategies and instruments below the threshold of armed conflict. The strategies can combine a wide range of open and covert methods aimed at creating dilemmas across sectors and levels. Hybrid threats can contribute to blurring the distinction between peace and armed conflict, and between state security and society’s security. An adversary can use hybrid instruments to target both the Armed Forces and important functions in society, including private commerce and industry. Protection against hybrid threats must therefore be viewed within the total defence framework.

Mutual situational awareness and the ability to cooperate across sectors are vital and will increase the ability to detect, attribute and handle incidents. Norway must have a national capability to establish comprehensive situational awareness across sectors. All sectors with interest in the area should be included, including non-military commerce and important industries. In particular, the Armed Forces can contribute with comprehensive situational awareness and expertise within analysis, intelligence and information sharing. The cooperation between the petroleum sector, the Norwegian Navy and the Intelligence Service on investigations of gas pipelines illustrates the potential inherent in such forms of cooperation. The Home Guard’s presence throughout the country makes it well suited to detect deviations from the norm in crisis and war, which can help identify and deal with various threats.

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The Chief of Defence recommends further developing the training infrastructure with training systems that provide more realistic training in all domains. This type of training system is highly sought after by our Allies and can help increase Norway’s relevance as an Allied training and exercise arena.

New technology makes it possible to conduct more realistic training and exercises in simulators and this potential will increase in the years to come. The use of a simulator contributes to increased skills and competence, while the training will be more cost-effective. It will also be possible to integrate simulators into intensive training programmes, to make the training more realistic. While simulators cannot replace all the intensive training and firing, they can reduce the need. Simulator technology can also help reduce emissions, noise or damage to nature.

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Total defence framework

The defence of Norway consists not only of military forces, but also society’s willingness and ability to support a military response. Total defence is based on mutual support and cooperation between the Armed Forces and civil society across the entire spectrum from peace operations to armed conflict.
Security in uncertain times

Allied forces will need support from the total defence framework actors, including transport, supplies and other services. Similar needs may apply in a crisis or war situation, within or outside Norway. For example, there may be a need for medical treatment by Allied personnel in Norway.

An understanding of roles, responsibilities and authority in emergency preparedness work is important. Society and the Armed Forces have limited resources. The priority given to increasing emergency preparedness in the community must start at the top and be holistically assessed and prepared down to the executing level. War must set the dimensions for assessments and measures. Emergency preparedness requires continuous long-term efforts. The long-term planning capability must therefore be further developed in all sectors, as a responsibility shared by everyone.

Society must maintain its basic functions, despite impacts across the crisis spectrum. There are numerous interdependencies. In particular, modern ICT solutions help to link the Armed Forces with the rest of the total defence framework in effective, but also less transparent, ways. In the wake of this development, new vulnerabilities arise. The ability to withstand cyber threats is a precondition for defence capability. Major military exercises such as Trident Juncture in 2018 have been important for the revitalisation and further development of the total defence framework. This is not to say that the large-scale military exercises necessarily address the most demanding scenarios for the basic functions of society. Exercises that challenge the breadth of the total defence framework help to strengthen confidence in our defence capability. Such exercises should therefore be prioritised and will help strengthen mental readiness and resilience.

A will to defend generates the ability to defend. An ability to defend also generates a will to defend. Experience from Ukraine indicates that in a situation where a nation’s security is threatened, there is great support from civil society.

Today, the national building and construction preparedness as part of the total defence framework does not have mechanisms to coordinate and support the needs of the defence sector. The national building and construction preparedness as part of the total defence framework must be re-established so that the Norwegian Defence Estates Agency can establish, maintain and restore critical real estate and infrastructure in support of operational capability. In connection with training and exercises, Allied forces will need support from the total defence framework actors, including transport, supplies and other services. Similar needs may apply in a crisis or war situation, within or outside Norway. For example, there may be a need for medical treatment by Allied personnel in Norway.

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Other recommendations

Modernisation and streamlining

Modernisation and streamlining are and will continue to be an ongoing process in the Armed Forces. The Armed Forces have established a centralised modernisation and streamlining programme to facilitate a comprehensive approach in this area. Nevertheless, initiative and action must also take place locally, and local leaders must have the authority to achieve efficiency gains at their level. The main objective of the modernisation and streamlining of the Armed Forces is to establish well-functioning and resource-efficient processes. Financial savings must not be an end in itself, but the result of more efficient processes.

The Chief of Defence recommends building on the same principles that have been fundamental during the current period:

- Standardisation and simplification that contribute to limiting variations and reducing costs
- Centralisation of control that contributes to increased process and task efficiency
- Combining forces in professional environments so that tasks are solved in one place, at one time, and with the right expertise.

The Armed Forces will continue to use the process, technology and organisation (PTO) perspective in their streamlining and modernisation efforts. A PTO approach facilitates a focus on effect and delivery, and can help to break development loose from old patterns of thinking.

Analyses under the modernisation and streamlining programme indicate that delayed or inadequate achievement of results can mainly be explained on the basis of three main areas: Fragmentation, decision-making capacity and conflicts of interest. Fragmentation occurs...
As a consequence of many actors and organisational units being involved in different processes. In addition, broken value chains contribute to fragmentation. Furthermore, ambiguity concerning responsibility and authority can lead to decisions being made by the wrong body, or not being taken at all. Unclear responsibilities in combination with a large number of actors and overlapping or conflicting regulations can ultimately lead to conflicts of interest, resulting in increased time consumption and reduced quality.

Organisations that are constantly evolving must continuously optimise processes and procedures, in order to streamline operations. This also applies to the Armed Forces. Some processes can be changed in the short term, while others will require wider measures to create improvement. The Armed Forces have identified significant potential gains within procurement, maintenance and investment. However, realising this potential does not seem realistic in the short term, due to governance challenges in the defence sector. New processes must be designed, and clear requirements must be set for financial benefits, in order to realise this potential.

The Armed Forces also have great potential to improve the efficiency of area use. The real estate and infrastructure area is only affected by the ongoing modernisation and streamlining work to a limited extent. The Armed Forces have recommended measures regarding personnel-related real estate and infrastructure, but there are probably also potential benefits from streamlining the sector’s equipment-related real estate and infrastructure. Models for the management and financing of real estate and infrastructure are utilised effectively. The ongoing processes will affect the future arrangement of staff and support structures. The Chief of Defence will revert to this in the work on the forthcoming long-term plan. The modernisation will help to clarify roles, responsibilities and authority, simplify the Armed Forces’ processes, and reduce fragmentation by adjusting the number of actors involved in joint and support functions. Deliveries will be standardised so as to reduce the overall consumption of resources. Simplification and standardisation will give scope to adjust the Armed Forces’ organisation, including the staff and support structures. Parallel to this, within the framework of the Government’s confidence reform, the Norwegian Ministry of Defence has decided to implement changes in the governance and arrangement of the sector, so that Norway can achieve greater defence capability from the resources available. The ongoing processes will affect the organisation and governance of the Armed Forces. The Chief of Defence has identified possible potential for reorganising and reducing the number of operational units, while also safeguarding the principle of equality in peace, crisis and war. At the time that this advice is given, it is too early to anticipate the number of operational units and the future arrangement of staff and support structures. The Chief of Defence will therefore revert to this in the work on the forthcoming long-term plan.

The Chief of Defence can see that the naming of the Armed Forces’ departments and management centres communicates the units’ functions and tasks to varying degrees. The Chief of Defence should have the scope to determine the naming of the units and departments. One solution might be for the deciding authorities to describe capabilities rather than structural names in long-term plans, as is the case today.

The day-to-day management and coordination of the Armed Forces’ activities is vested in the Defence Staff on behalf of the Chief of Defence.

The Armed Forces Operational Headquarters has overall responsibility for the Armed Forces’ operations in Norway and abroad. The operations must be led in accordance with strategic guidelines from the Chief of Defence. The Joint Operational Headquarters serve as the Chief of Defence’s adviser on military operations and contribute to the preparation of strategic advice to be used by the Armed Forces. Relations with NATO headquarters are maintained via the Military Mission in Brussels.

The Army, Navy, Air Force, Special Forces and Home Guard should have more comprehensive responsibility than they have today. For example, Armed Forces bases and camps are operated by several different actors whose roles, responsibilities and authority are fragmented. To facilitate more efficient running and operations, the main user should have more comprehensive responsibility for the activities associated with the base. For example, the Air Force should have overall responsibility for the air bases from which it operates.

The support structure must be organised in a way that is better adapted to the needs of the operational forces. At the same time, the organisation, supported by modern technological solutions and rational processes, must ensure that the resources granted and allocated to the defence sector are utilised effectively. The Armed Forces must facilitate effective management without compromising the structure’s rapid response capacity and robustness. The Armed Forces have an ongoing programme to consider modernisation and streamlining measures. Under the programme’s framework, it is assessed how the support structure should be organised and managed. The assessment had not been finalised when this advice was submitted, so the Chief of Defence will revert to this in the work on
Chapter 10

Financial basis

To realise the Military Advice’s highest ambition, there is an estimated need to increase budgetary allocations to the defence sector by approximately NOK 8 billion per year in the period from 2025 to 2031.

Given the financial magnitude, renewal of the maritime surface structure must receive supplementary funding, in full or in part, beyond the increase described.

The total increases are in addition to the commitment already planned, with the exception of the Government’s recent decision to achieve NATO’s 2-per-cent target by 2026. The unallocated funds towards the end of the period are necessary to maintain and develop the structure and associated capabilities.

As from 2031, an annual increase of around 1 per cent is needed to compensate for the defence specific inflation. This applies regardless of future structure and ambition. The defence sector’s support to Ukraine, including the re-procurement of donated equipment, is assumed by the Military Advice to be financed outside the sector’s financial framework.

As previously described, the investment plan is significantly over budget for the 2025-2028 period. Even with increased budgetary allocations, there is a need to revisit the ambition. A revision of the investment plan in a shorter perspective must also reflect the need to rectify shortfalls in the structure, in order to achieve a better balance between maintaining and developing defence capabilities. Alternatively, a more rapid increase of budgetary allocations may be considered.

The strengthening of the defence capabilities as described will entail a high level of investment over time. In the longer term, a sustainable balance between operations and investment must be established, as a persistently high level of investment puts pressure on operating costs. In the current long-term period, funds are proposed to be reallocated from investment to operation. The purpose is to rectify an imbalance.
Economy

The figure shows the estimated cost of realizing the advice’s highest ambition.

- Economic starting point
- Eliminate weaknesses in the current structure
- Strengthening the Armed Forces
- Maritime surface structure
- Recommended economic trajectory

Fig. 17
between investment and operations as a consequence of excessive investment activity within the given budgetary allocation. There is no absolute ratio between operations and investments, as investment requirements will vary with the age and condition of equipment and infrastructure. A starting point might be to approach an investment ratio of 20 per cent, in line with the minimum level in NATO’s Defence Investment Pledge. To balance operating and investment costs within a given budgetary allocation over time, it is recommended that the defence sector puts greater emphasis on the operational consequences of investments. This applies to all phases of a project procurement. The operational consequences must be given higher significance in the decision as to whether a project procurement should be implemented, and the balance between investment and operation must to a greater extent become an integrated element of the sector’s annual budgeting.

The Armed Forces depend on economic predictability. An increasing proportion of expenditure is exposed to exchange rate fluctuations through cooperation concerning equipment with other nations. The Armed Forces are a major energy consumer, in regards to using fuel for military equipment, but also to operate an extensive infrastructure. The defence sector has a high ratio of fixed costs, and thereby limited possibilities to handle externally driven changes in the cost level. Overall, this means that the sector’s economy is under constant pressure, as there is no established scheme to compensate for external factors. One consequence is that the Armed Forces are unable to employ, maintain and develop the defence capability as required. This has become clearer in recent years, with strong simultaneous growth within all of the factors mentioned. It is recommended that the Norwegian Ministry of Defence initiate a special compensation scheme for the defence sector, to ensure that defence capability can be employed, maintained and developed in line with the ambitions.

It is recommended that modernisation and streamlining continues along the same principles as for the current period, with allocated financial goals. The financial goals should not be set as a condition for financing the future structure and associated ambitions. It is recommended that the financial headroom that is created is used to accelerate the strengthening of defence capability, or to adjust the budgetary allocations.
Chapter 11

Risk and uncertainty

Several factors influence the defence sector’s ability to upgrade and strengthen the defence capability.

Even with the proposed personnel-related measures, a sufficient supply of personnel will entail a risk for the Armed Forces’ ability to achieve the plan. The introduction of each capability must take place on a holistic basis, taking due account of any personnel-related challenges.

The Armed Forces are affected by price fluctuations and supply challenges in the market. The market situation may require the Armed Forces to accept greater uncertainty and risk related to costs. To reduce the risk associated with longer lead times, the sector must facilitate shorter decision-making processes and take into account that the market increasingly expects access to capital early in the procurement phase.

The Armed Forces assess that increased budgets can be managed, provided that there is effective cooperation between the Norwegian Ministry of Defence and the defence sector’s agencies. The increase will require changes in how agencies and operating units are managed, and simplification of planning and procurement procedures, as well as the provision of the necessary personnel and expertise.

Timely decisions will be a condition for the proposed strengthening. The necessary paths must be chosen early in the coming period, to reduce uncertainty in the planning, implementation and execution of new capabilities.

To succeed in strengthening the Armed Forces, procurement of existing and new capabilities must be well-planned and synchronised. The defence sector must expect to encounter challenges, while new opportunities may also emerge. The Armed Forces must have the scope to deviate from plans and reprioritise resources as required. Moreover, a greater willingness to accept the risk that not all plans can be implemented, even when resources have been allocated, is required.