

Royal Norwegian Navy and Maritime Forces Overview

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Norway is a maritime nation with economic and security interests covering extensive ocean areas within its Exclusive Economic Zone (EEZ). The country's sea services, made up of the Royal Norwegian Navy (RNoN) and the Coast Guard (RNCG), are responsible for protecting the country's maritime sovereignty, territory and national interests at sea. The principal task of the RNoN is to acquire, train and operate naval forces and to make maritime capabilities available in readiness for operational deployment in peacetime, crisis and war, nationally and internationally.

Norway depends on the ocean, both as a source of economic wealth and as medium for moving imports and exports. Accordingly, Norway's sea services main-

homeland defence mission, since NATO planning would require most military reinforcements and equipment to transit to Norway by sea.

between Russia and many NATO nations highlight the security issues that drive Norway's continuing focus on protecting its northern region.

In peacetime, the RNoN and Coast Guard are responsible for patrolling the nation's large and critically important EEZ. In addition, as a result of the Schengen Treaty, Norway is responsible for enforcing external border controls along its land and sea frontier with Russia on behalf of all the Schengen countries.

Norway's emphasis on participation in international peace support operations requires the RNoN to maintain ships capable of deploying to international crises anywhere in the world. This in turn requires the Navy to prepare its deployable assets for operations in a generic multi-threat environment.

In order to fulfil its national, NATO and other mission obligations, the RNoN has the following tasks:

- Intelligence collection and surveillance in Norway's maritime approaches, primarily the North Cape area;
- Sea control operations in Norway's coastal waters;
- Protection of Norway's sea lanes of communication (SLOC);
- Exercise of national sovereignty at sea;
- Defensive operations to repel any sea-borne invasion of Norwegian territory;
- Participation in international naval forces, under UN or NATO auspices in times of peace, crisis, and war.

As part of the Navy, the RNCG has the following duties:

- General surveillance and control of the continental shelf, the EEZ, and in the fisheries zones around Svalbard and Jan Mayen islands;



Photo: ESD archives

The six ULA Class submarines of the RNoN are expected to be replaced by four Type 212CDs from 2025.

tain sea and air platforms that defend its offshore economic resources and its vital sea lanes of communication (SLOC). SLOC protection is a necessary component of its

The RNoN retains the mission and trains and equips for coastal defence and anti-invasion. While less prominent than during the Cold War, the sea services' responsibility to prevent and responding to territorial incursions in its northern regions has seen renewed focus in the current security environment. Russia's occupation of eastern Ukraine, the continuing robust naval and military capability present in Russia's northern region, and ongoing political tensions

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Photo: reddit.com

The six SKJOLD Class FAC were built by Kvaerner/Umoë Mandal incorporating the SENIT 2000 combat management system as a joint development of DCNS (now Naval Group) and Kongsberg.

- Fisheries protection operations;
- Support for civilian maritime activities, including weather reporting and search and rescue operations;
- Environmental protection operations;
- Humanitarian and disaster relief operations.

Maritime Forces Organisation, Composition and Disposition

RNoN ships are identified under the NATO (English) prefix HNoMS (His/Her Norwegian Majesty's Ship). In Norwegian, vessels are identified by the ship prefix KNM (Kongelig Norske Marine (Royal Norwegian Navy). The Navy consists of the Coastal Squadron, the Coast Guard and the academies. The Coastal Squadron is the Navy's operational force at sea and on land. The Coast Guard in peacetime is the Government's primary authority at sea and the armed forces' most important resource for handling incidents in the Norwegian territorial waters. The RNoN has 4,350 personnel.

The Coast Guard is operated by the RNoN and is organised into two squadrons with a main base at Sortland in North Norway. The Logistics Base at Ramsund provides logistics support for vessels that operate in the northern part of Norway and support the Naval Special Operations Forces in their training.

The Inspector General, Royal Norwegian Navy, supported by the Naval Staff, is responsible for force production. The Inspector General is based in Haakonsværn Naval Base in Bergen, which is the Norwegian Navy's main naval base. The RNoN's vessels are stationed at Bergen, and the base is

also assigned the tasks of education, training and exercises. A detachment of naval helicopters is stationed at Haakonsværn to support the frigates and Coast Guard operations in Southern Norway.

The RNoN consists of 60 ships and craft, including:

- Six ULA Class diesel-powered attack submarines (SSK);
- Five FRIDTJOF NANSEN class frigates;
- Six SKJOLD Class Fast Attack Craft (FAC);
- One HARSTAD Class (OSC).
- Six mine countermeasures vessels (MC-MV);
- Three OKSOY Class coastal minehunters (MHC).
- Three ALTA class coastal minesweepers (MSC).
- Sixteen Combatboat 90N type landing craft, assault (LCA).
- Twenty auxiliary and support ships and craft.

Photo: wikimedia



The five FRIDTJOF NANSEN Class AEGIS frigates were ordered from Spanish shipbuilder Bazan (now Navantia) and have been in RNoN service since 2011.

The Coast Guard is operated by the RNoN. It employs some 800 civilian and regular Navy personnel and is organised into two squadrons. It has its main base at Sortland in North Norway. The Logistics Base at Ramsund provides logistics support for vessels that operate in the northern part of Norway and support the Naval Special Operations Forces in their training. RNCG vessels are given the prefix "KV" (Kystvakt (Coast Guard) in Norwegian) and "NoCGV" (Norwegian Coast Guard Vessel) in English (NATO). Coast Guard ships are painted similarly to RNoN shipping, with the addition of "KYSTVAKT" painted amidships on the hull.

The RNCG operates fifteen ships and craft, including:

Twelve offshore patrol vessels (OPV):

- Three NORDKAPP Class;
- Three BARENTSHAV Class;
- One SVALBARD Class;
- Five NOMEN class.

Three patrol boats, including:

- One HARSTAD Class;
- One ALESUND Class.
- One REINE Class.

The Coast Guard is supported by a squadron of six LYNX Mk86 helicopters from the RNoAF; however, this squadron is expected to be replaced by six NH-90 helicopters. Also, two P-3B ORION aircraft are earmarked for Coast Guard duty under the cognisance of the Air Force.

The Royal Norwegian Navy Air Service (Marinens Flyvevesen (RNNAS)) is the naval air arm of the RNoN. Operationally, it is part of the sea service; however, it is administratively a component of the Air Force (RNoAF). The RNNAS operates the Augusta-Westland NH-90 naval helicopter. The RNoAF operates 119 maritime-capable fixed and rotary-wing aircraft, including one squadron of P-3C ORION maritime patrol aircraft.

Budgets and Sources of Military and Naval Equipment

AMI estimates the Norwegian Armed Forces (Forsvaret („Defence“ (NAF)) 2017 expenditures will exceed US\$6.1Bn, one of the highest budgets in Europe. Norway is working to build its Arctic defence and increase manpower as it focuses on its High North defences in response to the changing security environment in the region. Norway has committed to adding US\$19.6Bn to its defence budget over the next 20 years.

AMI estimates the RNoN will receive approximately 22% of the overall NAF defence expenditure in 2017-22. This amounts to about US\$1.4Bn annually, with some 21% (or about US\$281M) designated for the procurement of new platforms, systems and equipment.

Although the Royal Norwegian Coast Guard (RNCG) is subordinate to the RNoN, it is the recipient of its own funding stream from the MoD, assessed at about 2.6% of the overall NAF budget or US\$157M in 2017. Like the other branches of the Forsvaret, the RNCG appropriates approximately 22% (or US\$35M) of its allocation toward procurements.

From 2011 through 2016, Norway imported an estimated US\$1.2Bn in military equipment from foreign suppliers (about \$US1.0Bn less than from 2008 - 2013). During this time the NAF's primary suppliers were:

- Spain (US\$427M)
- US (US\$400M)
- France (US\$90M)
- United Kingdom (US\$80M)
- Italy (US\$63M).

Other suppliers of defence equipment to the RNoN include Sweden, The Netherlands and Germany.

Norway's primary domestic naval suppliers are Kongsberg Defense and Aerospace (KDA – one of the two main business elements of the Kongsberg Group) and Umoe Mandal AS. KDA produces several naval systems in service with the RNoN, including:

- Anti-ship missiles (ASMs) such as the widely exported PENGUIN and the new generation Naval Strike Missile (NSM);
- The MSI-90U Command and Weapon Control System (CWCS) for submarines. The MSI-90U is operational in Norway's six ULA Class submarines, and in the batch 1 Type 212 Class submarines built by and for Germany and Italy;
- The SENIT 2000 Combat Management System (CMS) in a teaming arrangement with DCNS. SENIT 2000 is aboard the new construction SKJOLD Class FACs.

- Sonars, through its sister company, Kongsberg Maritime AS.
- Maritime simulation systems supplied by Kongsberg Maritime.

Procurement Strategy

Norway's geographic location, membership in the European Union, NATO and other international bodies, as well as budget and other constraints all influence Norway's efforts to cooperate with other nations on defence procurement. A strategy of cooperative defence procurement also supports Norwegian companies exporting defence goods and services.

Each year, Norway's Defence Long Term Plan – Materiel publishes an unclassified overview of long-term materiel requirements. This publication does not examine each planned project in detail but creates

New Submarine Programme

Norway's largest naval procurement programme is the replacement for the six ULA Class submarines. The ULA Class will start leaving service in 2022, with one hull decommissioned each year after that.

In September 2014, the RNoN reportedly considered joining Sweden and the Netherlands in a joint submarine project. In January 2015, Saab and Damen teamed to replace the Royal Netherland Navy's (RNLN) WALRUS Class, making it even more plausible for the RNoN's replacement submarine programme to reduce costs and bring a mature design into service with a tri-country programme based on the Swedish A26. By September 2015, the RNoN had reportedly held discussions with the Polish Navy regarding possible participation in the Project ORKA programme to acquire three



The Kvaerner Mandal-built OKSOY and ALTA Class MCMV catamarans were commissioned from 1994 and constituted the RNoN's first attempt to operate naval vessels incorporating surface effect technology.

opportunities for in-depth discussions with companies in Norway's defence and related sectors. The process provides industry with early insight on future procurement opportunities, giving them the opportunity to plan for participation in future acquisition programmes. Ensuring domestic companies remain a part of Norway's defence supplier base supports the country's defence forces and promotes contributions to the country's exports in an increasingly competitive international defence market. The success of Kongsberg and other Norwegian defence and security companies indicate this procurement strategy has generally been successful.

new construction submarines. At the time, German buildertkMS and French company DCNS were seen as the leading contenders for the Polish submarine programme.

In June 2016, the Norwegian Government short-listed the SCORPÈNE and the TKMS 212/214 as new submarine candidates, eliminating the Swedish A26 design (and any partnership with Sweden) from the competition. As with the original ULA programme, the programme for the replacement submarine would have some of the modules manufactured in Norway, with final assembly at the foreign partner's yard.

In March 2017, the Norwegian Defence Ministry announced that they had chosen

tkMS as a strategic partner to supply new submarines to the Norwegian Navy. The German Type 212CD (CD = Common Design) was selected over the DCNS SCORPÈNE as the preferred design. This award marked a significant award for the German submarine builder, following a string of DCNS submarine programme wins in Australia and Malaysia.

AMI estimates the final construction contract for the submarine programme will be awarded in 2019, with the first unit of the class entering service by 2025. Current planning will have the programme acquire four units (down from the original six) to replace the six ULA class hulls for Norway and two units to complement the German Class 212A. All four new Norwegian submarines are expected to be in service by 2031. The programme's total acquisition cost is estimated at \$1.8Bn.

Other Naval Procurements

AMI profiles several other naval procurement programmes now active in Norway, including:

- Auxiliaries
- MAUD Class Logistical Support Ship (LSS) (AOR)
- KRONPRINS HAAKON Class Oceanographic Research Icebreaker (AGOR)
- Offshore Patrol Vessels
- Coast Guard Offshore Patrol Vessel (OPV) (Project 6615)
- Coast Guard Offshore Patrol Vessel (OPV) (Project 3049)
- Patrol Vessels
- STRIDSBAT 90 Replacement



Photo: ESD archives

Kongsberg's NSM has been selected to equip the NANSEN and SKJOLD Class vessels of the RNoN as an anti-ship and land-attack missile. Future operators include Poland, Malaysia, the US and Germany.

Taken together, these five programmes represent approximately \$1.3Bn in new construction platforms that will be put in service through 2025.

The RNoN is also assessed as moving ahead with upgrades to their MCMV force, the six hulls of which were commissioned more than 20 years ago. Upgrades could include UUVs (such as the HUGIN series manufactured by Kongsberg). Norway may also be looking to add an unmanned surface vessel component to their MCMV force. The Textron Common Unmanned Surface Vessel, the centrepiece of the current US Navy

UISS mine warfare programme, would be a strong candidate for a potential acquisition, possibly with other Northern European navies also looking to improve their mine warfare capability.

Summary

The RNoN is a regional naval force equipped with modern platforms and assessed as capable of effectively responding to modern air, surface and submarine threats in low densities and for limited periods. The sea service continues to train and equip for conventional naval conflict scenarios and has directed the bulk of its investments in new platforms and systems towards anti-ship, anti-air and anti-submarine capabilities.

Norway has followed the trend of other European fleets since the end of the Cold War by dramatically reducing the number of maritime forces and personnel. New construction ship and programmes have concentrated resources in fewer larger platforms better capable of distant deployments and meeting the broader peacetime requirements of the country's political leadership. The NANSEN frigate programme is one example of this trend, as is the ULA replacement programme.

The Arctic region continues to remain a national security priority, and so the RNCG continues to make the region a focus of its operational effort. RNCG operations in the northern reaches ensure the country's maritime sovereignty and security of vital offshore oil reserves and other important resources (fisheries) concentrated on the continental shelf ■



As a central element of the current UISS mine warfare programme of the US Navy, Textron's Common Unmanned Surface Vessel might be considered a valuable addition to the Norwegian MCM force.

Photo: Textron Systems