

Scope on German Naval Air Force (Nordholz)

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The naval units with flying aircraft saw some reorganisation in the last years. Not only was there a major change with the disbandment of MFG-1 & 2 and giving up the role of anti-ship warfare by fast jets but also the anti submarine warfare task was boosted by acquiring modernised P-3C Orion's. Today operational activities are concentrated in MFG-3 & MFG-5. While Marinefliegergeschwader 5 (MFG-5) is located at Kiel-Holtenau flying Sea King Mk. 41 in the SAR role, all other aircraft types in the inventory serve with MFG-3 at Nordholz.

Units at Nordholz

Nordholz Air Base is quite large with three 'staffels' (squadrons) and 4 types of aircraft organized in MFG-3 and named after 'Graf Zeppelin' the famous designer of airships. Nordholz will be the most important place for naval aviation in the next years and will see many flying activities. The third 'staffel' is equipped with the Sea Lynx Mk.88A (Super Lynx Mk.100) of which 22 were acquired since 1981 originally as Mk. 88 version. The helicopters are embarked on F-122, F-123 and F-124 frigates (two helicopters at one ship) for the ASW and ASuW role to form the ears and eyes around the ship and to watch or hunt submarines. For this last role the Lynx can use the dipping sonar and when necessary attack the submarine with two Mk.46 mod.2 torpedoes or depth charges. The Lynx helicopters were upgraded between 1998 and 2003 to Mk. 88A version which work was partly done in the Donauworth factory of Eurocopter Germany and included new fuselage and avionics. With the upgrade the helicopters were optimized for surveillance above the water and the search for ships with a Marconi Sea Spray 3000 radar with a 360 degree antenna and a multi role turret (MRT) forward looking infra red (FLIR) set on the nose. Upgrades including GPS navigation. Typical ASW missions can be up to 28 kilometres from the ship and Surveillance missions up to 140 kilometres. The Lynx can transport 9 soldiers and is in the attack role capable of using 4 Sea Skua anti ship rockets. Secondary roles are SAR and medevac operations. The helicopters saw themselves operated in the conflicts in former Yugoslavia in the last decade to help in the control on the weapons embargo on the sea in the surveillance role. Since 2002 is one frigate with two embarked Super Lynxes stationed in Djibouti to do sea control on ships in the Gulf of Aden as part of operation Enduring Freedom.

Maritime patrol over the seas

Since many years the Breguet BR1150 Atlantic was the 'face' of the German long range maritime patrol and long range ASW. In 1965 the first of 20 Atlantics entered service with the 'marineflieger' (German Navy) of which 15 were delivered in the maritime reconnaissance/anti submarine warfare version and 5 in the electronic warfare (SIGINT) version. With a crew of 12 persons up to 18 hours patrolling above the sea is possible. Submarines can be discovered by the MAD (Magnetic Anomaly

Detection) which sense disturbing in the earth magnetic field and can be located with active or passive sonobuoys dropped from the under fuselage. An ECM pod and a retractable CSF radar are used to watch the activities above the water. From a internal bay eight Mk.46 Torpedoes can be launched to eliminate ships or subs. Also is the Atlantic capable of carrying AS-12/20/30 anti ship rockets or AS-37 anti radar rockets under 4 wing pylons. Fourteen Atlantics were upgraded during 1981-1983 with improvements at radar, sonar and navigation equipment. In 1996 the NDV program ('nutzungsdauerverlängerung') modernised the Atlantic with GPS and improvements on IR and communications equipment while The SIGINT aircraft received sensor improvements and the aircraft were boosted in this life extension program to serve until 2010. However eight P-3C Orion's were bought from the Netherlands for 20,8 million each resulting in the termination of the MPA Atlantics life in the end of 2006. The SIGINT version, originally bought to collect intelligence signals from behind the iron curtain is still necessary while this task continues to be important in other area's and is planned to stay active until 2010. This includes two aircraft. In the meanwhile Germany is investigating the possibility to replace the manned aircraft with UAV's like the Global Hawk, so things could be changed if there is money to contribute to this matter. German Atlantics played an important role in several multilateral operations for example three examples provide maritime reconnaissance during the Gulf War in 1991 flying from Sardinia and during 1992-1996 the Atlantic was again present in guarding the Adriatic during weapons embargo in the region flying again from Sardinia and the SIGINT version was active above the Balkan. In 1999 an Atlantic was in war action and this was the first time for Germany since world war two. From 2002 three Atlantics are operating from Mombassa Kenya to support the naval detachment in Djibouti located there for operation Enduring Freedom.

Orion's for Atlantics

While the Atlantics were ageing (designed for a maximum life of 25 years, but with NDV some almost 40 years in active service) and problems were rising in the maintenance Germany was very willing to acquire the P-3C Orion's of the Dutch Navy suddenly put out of service by Dutch defence cut backs. The aircraft just received a major upgrade (Capability Upkeep Program = CUP) at the Lockheed Martin factory. The Orion's received new avionics with an inverse synthetic aperture radar (ISAR) with 360 degree antenna providing very sharp images with small details like periscopes visible with a range till 360 kilometres. Other features were new computers, data-link system, IFF and ESM (Electronic Support Missions). The new systems makes the aircraft very potent in finding threats but the active capabilities were also upgraded. The capacity of 82 passive/active sonobuoys and the possible use of Mk. 46 torpedoes, depth charges or AGM-65 Maverick anti ship rockets stayed but other weapons are currently an option. This includes possibilities to launch AGM-84D Harpoon's, AGM-84E SLAM-R, AIM-9L Sidewinders and Mk. 50 torpedoes. The Orion has an enhanced capability in ASW missions with a maximum to 17 hours. Germany is proud on the new aircraft and the Dutch did a fine job to integrate the Germans in the secrets of operating the Orion. The Orion's are expected fully operational within MFG-3's first 'staffel' at the beginning of 2007 and are scheduled to stay in service until 2020.

Pollution control

In a previous concept the first Dornier Do 228 LM was operating with MFG-5 from Kiel alongside two Dornier Do-28's. Since 1994 the unit was transferred to Nordholz MFG-3 and operated with four Dornier Do-228 LM's. Two examples are just for liaison work in the navy but they will not survive the coming years and MFG-3 will continue with the other two specialised in pollution control (MARPOL= Maritime Pollution). Both North and East seas are to be controlled for oil disasters or leakage from ships and control of obeying rules and laws on the sea. Modern equipment and imaging techniques like SLAR (Side Looking Airborne Radar) enables the aircraft to find oil pollution under all weather circumstances. The aircraft are operating closely with other aircraft from other surrounding nations with the same tasks, partly naval and partly coast guard aircraft forming a pool. This pool of aircraft sometimes execute missions on each others coastal area's. The Do-228 LM's are currently operating with the second 'staffel' alongside the Atlantics.

MFG-5 is doing the SAR-work

The Search and Rescue work is a task for the 'mighty' Seaking. During 1972-1975 a batch of 21 Seaking Mk.41 entered service and were modernised a few times. The helicopter is popular with the pilots and called 'the force provider of the German Navy'. The pilots are going on mission when everyone else stops for weather circumstances. The helicopters are covering the North and East seas and the north part of Schleswig Holstein. In the rescue work the crew (two pilots, the mission commander and a mechanic/rescue assistant) acts as one team understanding each other completely. The art of cooperation is called 'crew resource management'. Besides SAR the helicopters are used for surveillance, medevac, evacuations, logistic support and tactical transport above the sea and land. Transport can include special forces (up to 19 soldiers) and the Seakings can be armed with four Sea Skua anti ship rockets in ASuW tasks while chaff and flares are installed for self defence. The helicopters are using thermal imaging techniques to search the sea surface. A hoist can lift one person with a maximum of 130 kg and it is possible to lift 2 persons (260 kg) in a rope netting called 'astronauten korb'. The Seaking saw action in the Persian Gulf in 1991 (white colours), with the German detachment in Djibouti embarked on ships and with the Tsunami disaster in Asia (2004). The Seaking is planned to stay in service until 2012. When the new NH-90 arrives (expected in 2007) the Seaking's tasks will gradually be taken over by the NH-90. By that time MFG-5 will be absorbed by MFG-3 at Nordholz forming a kind of superbase.

Future operations

MFG-3 will phase out the MPA Atlantics as soon as enough crews are ready to manned the new Orion's and will gain experience on this type with its enhanced capabilities. From 2007 the NH-90 will be coming in service. The helicopter is designed for replacement of types such as the Sea Lynx and Seaking. The strong helicopters is capable to operate under extreme weather circumstances from ashore or from ships. Composite materials are extensively used. With 1-2 pilots and one or two sensor operators/tactical operators the helicopter can transport up to 20 troops.

The capacities in ASW and ASuW are refined. Next to classical sonobuoys and dipping sonar are a MAD (Magnetic Anomaly Detector), FLIR (Forward Looking Infra Red) and EW systems installed. The helicopter is far more computerised with FADEC (Full automated Digital Engine Control). Weapons are the current anti submarine or anti surface weapons and there will be a capability of Anti Air Warfare. It is expected when the NH-90 is concentrated on Nordholz there will be an increased cooperation with the army and air force using the TTH version (Tactical Transport Helicopter). The maritime NFH (Nato Frigate Helicopter, in Germany called the MH-90) is also bought in surrounding countries like the Netherlands or Scandinavia. Some 38 examples will enter the Marineflieger. It is expected that MFG-3 will remain as one big composed wing at Nordholz keeping up the good work for the German Navy.

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