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**Quick Reaction Air
Operations**



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QRA at Bodø Airbase: The Perspective of Lt. Col. Henning Hansen Homb

05/24/2018

By Robbin Laird

During visits to the United Kingdom, I have had a chance to see and visit with RAF the operators of the quick reaction air capability in the United Kingdom.

A key point is that to have two aircraft ready to fly on a moment's notice, or within 15 minutes, a significant pyramid of support is necessary to deliver a QRA capability.

But the question of what the pyramid looks like beyond this is simply having two pilots ready 24/7 with 2 support staff and eight engineers for each week in support as well.

I(F) Squadron, II (AC) Sqn. and 6 Sqn. provide the aircraft, pilots and engineers for the 24/7 operation. The Air Traffic Control Center is manned 24/7 to enable aircraft to launch at any time. The Ground Support System or GSS provides support to the Typhoons with mission data and computer systems used by the aircraft.

And chefs and catering staff are on station to cook and serve meals for duty personnel, three meals a day, 365 days a year.

To put it bluntly: to be 24/7 ready is a significant demand signal for the Typhoon fleet, and one which can be overlooked in terms of the number of aircraft which are required to remain ready for operational launch, 24/7 and 365 days a year.

According to the QRA North team, the Typhoon has performed its role well, but it requires maintainers, pilots and operations personnel to pay close attention to the rotation of aircraft into the demand side of QRA.

And when the RAF deploys to the Baltics, in effect, the UK is supporting three QRA efforts.

The pyramid is demanding; the photos of the planes on strip alert simply masks the significant level of effort to ensure that they are on strip alert.

This demand side is one which can be easily overlooked by everyone, except those providing the capability and the intruders into UK airspace.

During my recent visit to Bodø Airbase, I was able to discuss the QRA effort at the airbase and the transition being put in place to transition from F-16s doing this mission from Bodø to F-35s operating from Evenes Air Station, where P-8s may operate from as well.

Evenes Air Station is significantly further north from Bodø, which will move the QRA effort further north as well.

The Norwegian government is restructuring its basing infrastructure, closing some airbases and building up others. Bodø Airbase itself is scheduled to close.

I discussed the QRA effort, the past and future of the Bodø Airbase, and the shift from the F-16 to F-35 for QRA with the Lt. Col. Henning Hansen Homb, Group Commander 132 Air Wing and Base Commander Bodø and Major Trond Ertsgaard who is a key member of the Wing as well.

The Bodø Airbase provides the pyramid from which the current F-16 QRA capability is generated. Like RAF Coningsby or RAF Lossiemouth, from which current RAF Typhoon QRAs are generated, Bodø Airbase is a main F-16 airbase and as such provides the pyramid to support the F-16s generated for QRA.

Bodø is strategically located to contribute to both air and maritime defense of Norway. It must always be remembered that Norway has very significant maritime as well as airspace to protect.

As Lt. Col. Homb underscored: “Norway’s territorial waters are six times the size of our land area. This is also an area which we need to defend.”

The base itself in its current configuration was built during the cold war and can host multiple squadrons and has a number of hardened shelters for operations as well.

As a main F-16 operating base, it can draw upon the personnel who fly, operate and maintain F-16s to support QRA activities.

Indeed, the base has demonstrated in operations, its ability to generate airpower as required by the Norwegian political authorities in times of crisis.

According to Lt. Col. Homb, during the Norwegian contribution to the 2011 Libyan operation, the turn around from the tasking to participate to delivering weapons during first strikes was only six days.

“That certainly proved that our training system clearly works.

“You can not go from a holiday weekend back home, to being ordered to participate in an international operation and then to deliver weapons within six days, if your training is not on track and clearly working.”

Bodø Airbase as a large airbase dominates the town and is located at the tip of the peninsula on which the town is located.

The operating conditions are challenging for sure with winds and temperatures which create challenges to operate combat aircraft, and which require a learning curve for allies who come to the airbase to work with the Norwegians as well.

The basic facts as provided by the Wing Commander with regard to Bodø were as follows:

- **Midnight sun between May 30th and July 12th;**
- **Dark time between December 1st and January 9th;**
- **Average temperature in summer time +13.6 degrees C and in winter time 12.1 degrees C;**
- **Well known as a windy city and for having the world’s strongest maelstrom, Saltstraume;**
- **And with the highest mountain in the area being Lurfjelltind, 1.284m above sea level**

The following photo captures in some sense the challenge:



Put bluntly, operating a QRA force with a requirement to launch on 15 minutes from the order to launch is not an easy task.

And as a large airbase, Bodø has been a key one where allies come to operate in exercises with the Norwegian Air Force as will be done in this year's Trident Juncture exercise.

And the larger shelters built to house an F-15 can take F-35s as well.

The local knowledge provided by the Bodø airmen are important to inform allies when they come to Norway of the challenges as well.

“We have beautiful scenery for flying but many hazards and dangers as well which we need to inform our colleagues from allied countries about when they fly in our area as well.

“Flying in mainland Europe is not the same as flying in our area for sure.”

But the base is being closed as part of a basing cutback to support defense economies in support of an overall defense modernization strategy.

The close down of Bodø does pose challenges as well.

The first challenge is that when the F-35 takes over from the F-16 it will operate at Evenes Air Station, which is not scheduled to be a main operating base for the F-35.

The main operating base for F-35 will be the Ørland airbase.

This means that a detachment of F-35s to do QRA will be operating from Evenes and supported from Ørland, which is different from operating from a large operating base of the same aircraft.

Getting the deployment support right will be a challenge but one not dissimilar from the Baltic Air Policing or Icelandic Air Policing mission experience.

Currently, the Norwegian Air Force has about 200 personnel to support the F-16 base overall and from that force can support the QRA mission as well.

The second is that Bodø has proven to be a key allied support base and sorting through how best to base allies when they come for an exercise or a crisis is a work in progress, one the Norwegians take very seriously.

But as the future of Bodø is worked out, facilities could remain beyond the currently scheduled search and rescue force.

Shelters could remain in some areas, if the approach is not one of complete elimination, and residual support capabilities could be sustained as projected in the following drawing of a possible future Bodø situation.



A further challenge seen from the QRA perspective is that the F-35 is not an F-16 or a Typhoon for that matter.

What does a QRA mission conducted by an F-35 look like?

It is a multi-mission and low observable platform; how best to use it in the QRA role?

This is clearly a work in progress in which the Norwegians will be pioneering what I have called F-35 2.0, namely, how will use the aircraft as part of an overall combat transformation process?

Clearly, the Norwegians are modernizing their airpower and reshaping their infrastructure to support it and Bodø is part of that transition.

The current role of the Air Station was summed up by the Lt. Col. Homb in the following chart:



Norwegian Armed Forces
RNoAF
132 Air Wing

Main tasks

- n NATO QRA 24/7, national QRA on demand
- n Force production of Combat Ready units, incl. preparing personnel for transition to F-35
- n Prepare for national and international operations
- n Be prepared to receive and host allied forces
- n Support national and allied forces in peacetime, crisis and war
- n Cross Border Training (CBT) development



QRA and Portugal

05/25/2018

By Allied Air Command

For the fourth time the Portuguese Air Force assumed lead of the Baltic Air Policing mission. During the traditional ceremony at Šiauliai Airbase on May 2 a detachment of the Portuguese Air Force was handed over the symbolic key to the Baltic Airspace from the outgoing detachment of the Royal Danish Air Force.

An additional detachment of the Spanish Air Force, also based at Šiauliai, will augment the Portuguese airmen during their rotation, next to a French detachment operating out of Ämari, Estonia as of May 3.

“As the Portuguese F-16 detachment commander, I’m proud of being part of this united effort, aware of the great responsibility and 100% committed to this mission” Lieutenant-Colonel Afonso Gaiolas, Commander of the leading Portuguese detachment stated in his speech during the ceremony. His detachment consists of four F-16 fighter jets and a total of 84 personnel.

The commander of the outgoing Danish detachment, Lieutenant-Colonel John Kristensen, took the opportunity to thank his Lithuanian hosts for their support.

“The Lithuanian Air Force and all the personnel on the Airbase provided outstanding support to us” he said.

Addressing his Airmen he added: “We have solved the mission with jets ready 100% of the time with only 54 people. That can only be done with dedicated and well trained personnel”. The Danish rotation was marked by their contribution to the 100th anniversary of Lithuanian independence for which Danish pilots conducted a flyby during a parade at Lithuania’s capital Vilnius.

Among the guests of the Handover/Takeover ceremony was General Tod Wolters, Commander Allied Air Command.

Addressing all three detachments he said “I’d like to express my personal and professional appreciation to you, the pilots, maintainers, mission supporters and operators for what you have done and will continue to do to secure the skies of NATO”. Allied Air Command, headquartered at Ramstein, Germany is NATO’s single command for all Alliance air matters and oversees all Air Policing in European NATO airspace.

Both Air Forces from Portugal and Spain are not new to the mission. During the fourteen-year history of Baltic Air Policing, the Portuguese Air Force deployed to Lithuania three times already in 2007, 2014 and 2016.

The Spanish Air Force is contributing to the mission for the fifth time after two deployments to Šiauliai in 2006 and 2016 and after augmenting the mission twice out of Āmari, Estonia in 2015 and 2017.

Four Spanish Eurofighter Typhoon jets will augment the Portuguese F-16s during the current rotation.

A third detachment from the French Air Force is going to take over an additional augmenting role from the Italian Air Force on May 3 in Āmari, Estonia.

Story by Allied Air Command Public Affairs Office.

French Quick Reaction Force and Syrian Air Strikes

05/25/2018

By Murielle Delaporte

Whenever a high visibility military mission occurs – such as the April 13 combined strikes against Syrian chemical capabilities – observers in democratic countries tend to focus on the glass half full and try to dig out every single matter that might have gone wrong.

France is no exception and in the aftermath of the French air force and navy’s participation to Opération Hamilton, along with its American and British allies, two kinds of criticism could be heard.

The first – and most immediate – was political, as the three allies intervened without the blessing of a United Nations mandate.

The second – which occurred after a few leaks in the media – has been technical.

One Rafale fighter came back with one of its missiles, while one of the multi-mission frigates was unable to launch three brand new generation cruise missiles (the so-called MdCN, for Missiles de Croisière Naval) and had to pass the mission on to another frigate.

In both cases there are (classified) reasons and lessons learned behind the issues, which – no doubt – the French armed forces, along with missile-maker MBDA, are analyzing right now, not the least of which was the fact that the naval cruise missiles were being used for the very first time. But what really matters here are what the military refers to as the effects of the strike.

For France that has been a success for the same reasons it has been for the United States and the United Kingdom. Both the French Minister of the Armed Forces, Florence Parly, and the Chief of the Defense Staff, Gen. Francois Lecointre, stressed in their joint press conference following the strike that the objectives set by President Macron had been met with success.

Politically these objectives were twofold:

Avoid the 2013 debacle when France under President Hollande was the only one left to be willing to retaliate against Syria's use of chemical weapons (after President Obama decided against American participation at the last minute), and therefore took no action.

In actual fact, President Macron, in a manner similar to his American counterpart, went out of his way very early in his mandate to restate that no red line would be crossed under his watch.

The rationale is both rooted in respect for international law – the interdiction of chemical weapons. Period. And the gutsy fear of some Verdun remake by Daesh – since Islamist terrorists would love to get their hands on that type of evil stockpile.

At the same time, no one wishes to start World War III and much had to be done to avoid Russian retaliation, which could be triggered not only by a direct confrontation with Russian fighters and air defense systems, but also by Moscow's public commitment to protect Bashar al Assad.

Now if you think that these political goals are antagonistic and incompatible, try to translate that into a coherent military action!

Almost impossible, right?

That meant preventing escalation, having zero collateral damage and deconflicting while still deterring. That meant selecting worthwhile targets in terms of the main goal — affecting Syrian potential for future chemical strikes. (The last US Tomahawk strike in 2017, however useful politically, did not, unfortunately, suffice).

France was in charge of hitting two facilities assembling and stockpiling chemical weapons near Homs. They were hit simultaneously by a combination of airborne and sea-based missiles: a total of 12 out of the 105 fired by the three countries, which, when added to the British salvo of eight Stormshadows, constitutes the usual percentage of the French and British contributions to coalition operations (roughly 20 percent).

The French armed forces deployed for Opération Hamilton a total of 17 aircraft: five Rafales, four Mirages 2000 for protection, two AWACS, six C-135 FR) and six ships (three FREMMs ; one FAA (anti air) ; 1 FASM (anti-submarine) ; 1 BCR (command and support).

Being able to strike every 10 minutes from different platforms using different types of missiles meant working in perfect synchronicity on a trilateral basis and among the three countries' different services, something that cannot be improvised.

Political meetings beforehand and constant contacts and coordination between the three countries' ministers of defense and military chiefs were crucial to prepare a pretty risky mission both politically and technically, but what counted to achieve that kind of success have been the decades of mil-to-mil relationship and training among the three allies.

Building the trust necessary so that a French mission commander based in the Mediterranean could direct part of the strikes in an autonomous manner did not just happen overnight. This is the result of years and years of flying and sailing together and operating together whether in Afghanistan or over Libya or in Niger. It is also the result of the joint planning done in 2013, albeit in a very, very different threat environment.

Deconflicting of course led to the evacuation of any living soul from these targets, but still, military planning had to ensure no civilian deaths by operating at night and of course, given the nature of the targets, in perfect aerological conditions. It also of course had to prepare the right response to a potential Anti-Access/Area Denial strategy on the ground, since the fog of war is always much clearer after the war...

Achieving all this synchronicity, C2 integration, redundancy, target selection and precision strike require in other words a very high level of technicity, which tends to stem in France from the fact it has been a nuclear power for more than five decades. In fact the whole French armed forces model is built around deterrence.

France's quick reaction force is defined upon the rigor, reactivity 24/7, safety and ability to penetrate a theater first, far away and in depth.

French Air Force Base 113 in Saint-Dizier is one of the historic fighter base and nuclear base and it is from there that long-range raids can be performed, such as the 10-hour flight that was performed from the mainland to Syria this month over a distance of 7,000 kilometers (which required a total of five refuelings).

The high level of technical expertise and rigor demonstrated in the mission led to its success. Moscow chose not to activate its military assets and just observe the strikes.

However the Kremlin does not lack options and has already retaliated indirectly against France the same way it did in 2015 after Crimea, by cutting off NATO's access to the giant Russian Antonov 124 transport plane through the SALIS (Strategic Airlift International Solution) contract.

It's a 12-year-old joint venture of Ukrainian Antonov Airlines and Russian Volga-Dnepr. The SALIS contract has been crucial for France, allowing it to move helicopters, tanks and other heavy gear to conduct military operations in theaters such as the current Barkhane operation in Africa...

This article was first published by our partner Breaking Defense on May 2, 2018.

Quick Reaction Alert North: The RAF and QRA

05/24/2018

By Robbin Laird

When I was a kid, I remember the images of deterrence which were provided by strip alert bombers against the Soviet threat.

Now we have images in the press of the strip alert Typhoons dealing with the air defence of the United Kingdom against a wider variety of threats than simply that of the Soviet Union, but which clearly includes the successor state, that of Russia.

When I visited RAF Coningsby, I learned that the base housed QRA South or Quick Reaction Alert South.

Question: The RAF has had to focus more on British airspace protection with both the terrorist threat and the upsurge in Russian airspace activity impacting on the UK.

What role has the Quick Reaction Alert force played in this process?

Answer: At RAF Coningsby, we are more focused on the terrorist threat whereas at RAF Lossiemouth we focus more on the Russian activities.

But the demand on resources is significant. Everything at each base, from equipment, to logistics to training is focused on maintaining the alert posture and ensuring we are ready 24/7.

The aircraft and pilots on QRA are only the tip of the pyramid of activity to ensure success in such an important mission.

<http://sldinfo.com/royal-air-force-operations-and-evolving-concepts-of-operations-shaping-a-triple-transition/>

When I visited RAF Lossiemouth in June 2016, I had a chance to visit the QRA based at Lossiemouth which is in addition to the one at RAF Coningsby

According to an RAF article published on September 19, 2014:

Royal Air Force aircraft at RAF Lossiemouth have launched the Quick Reaction Alert (QRA) for the first time since the Moray base took on the role of defending the UK's Northern airspace. Typhoon jets were scrambled to identify aircraft in international airspace. The aircraft identified as Russian military 'Bears', did not enter UK airspace.

RAF Lossiemouth's Station Commander, Group Captain Mark Chappell, said:

"This first successful launch for QRA North has been what all of the hard work by RAF Leuchars and RAF Lossiemouth personnel over recent months has been for.

"The relocation of two Typhoon squadrons was a significant challenge, one that was met by our whole team. The many months of preparation and infrastructure improvements have made us absolutely ready for this launch, and shows we are in the best position to provide the service to the United Kingdom that the Royal Air Force was primarily created for – that is, the protection of our airspace."

Royal Air Force Lossiemouth began a new era in its history on the 1st of September when it assumed the provision of what the RAF calls the 'Quick Reaction Alert (Interceptor) North' task for the United Kingdom.

The role is carried out by crews from 6 Squadron. The pilot of the first launch said:

"It was an honour to be part of what is a milestone in the history of RAF Lossiemouth. With the move of Quick Reaction Alert from Leuchars to Lossiemouth, it has been a huge ask of many personnel. The fact that we had a flawless scramble and intercept of two Russian Bears was a testament to the hard work and commitment of all personnel involved.

“A very proud moment, not just for the pilots who did the intercept but the engineering crews who did a fantastic job, as well as many other station personnel involved in this constant commitment.”

<http://www.raf.mod.uk/news/archive/first-qa-for-raf-lossiemouth-19092014>

During my visit, I was able to address the question of the nature of the pyramid necessary to launch QRA ready aircraft.

Visiting the QRA area demonstrated the 24/7 quality of the operation.

There was the red button to generate the movement of pilots and personnel to launch the aircraft very rapidly.

There are ops areas and offices, crew rooms, a dining area and kitchen to serve the staff, bedrooms for the rotational crew and a gym to remain ready.

But the question of what the pyramid looks like beyond this is simply having two pilots ready 24/7 with 2 support staff and eight engineers for each week in support as well.

1(F) Squadron, II (AC) Sqn. and 6 Sqn. provide the aircraft, pilots and engineers for the 24/7 operation. The Air Traffic Control Center is manned 24/7 to enable aircraft to launch at any time. The Ground Support System or GSS provides support to the Typhoons with mission data and computer systems used by the aircraft.

And chefs and catering staff are on station to cook and serve meals for duty personnel, three meals a day, 365 days a year.

To put it bluntly: to be 24/7 ready is a significant demand signal for the Typhoon fleet, and one which can be overlooked in terms of the number of aircraft which are required to remain ready for operational launch, 24/7 and 365 days a year.

According to the QRA North team, the Typhoon has performed its role well, but it requires maintainers, pilots and operations personnel to pay close attention to the rotation of aircraft into the demand side of QRA.

And when the RAF deploys to the Baltics, in effect, the UK is supporting three QRA efforts.

The pyramid is demanding; the photos of the planes on strip alert simply masks the significant level of effort to ensure that they are on strip alert.

This demand side is one which can be easily overlooked by everyone, except those providing the capability and the intruders into UK airspace.

The featured photo shows an RAF Typhoon (bottom) intercepts two Russian MiG 31 Foxhound Fighters, as senior RAF sources warn that the number of Russian incursions has reached a peak not seen ‘in living memory.’ June 2015. Credit: Daily Mail.

This article was first published on November 13, 2016.

QRA and the Spanish Air Force

05/25/2018

By Robbin Laird

On November 2, 2016, we had a chance to visit the Spanish Air Force at their Albacete Airbase and to talk with a Eurofighter pilot as well as senior maintenance officer.

They both had worked with Eurofighter in the latest Baltic Air Patrol earlier this year.

Albacete flies a regular Quick Reaction Alert force to provide for Spanish security in the Mediterranean.

The engagement in the Baltics is in effect a QRA mission further north.

In an article published on January 11, 2016 by the Spanish Air Force, the deployment earlier this year to the Baltics, which involved our hosts, was described.

http://www.ejercitodelaire.mde.es/EA/ejercitodelaire/en/media/news/2016/content/texto_0001.html

On January 4, four Eurofighter planes took off from Albacete Air Base with Siauliai in Lithuania as their destination.

Their aim was to join the VILKAS detachment and therefore carry out surveillance missions of the air space of the Baltic Republics of Estonia, Latvia and Lithuania.

In this way, NATO's commitment to the carrying out of air policing in the Baltic has been continued.

After four hours of flight and the re-fuelling of an Italian KC-767 in German airspace, the aircraft arrived without stopovers and without event at Siauliai.

Following the relief of the previous nation Hungary, the first alert service was in place within days.

Ahead, there are four months of air policing in the Baltic, under the command of Lieutenant Colonel Head of Force Juan Antonio Ballesta Miñarro.

The 14th Wing will act as the lead nation of the assets deployed in the Baltic; specifically, of the Belgian F-16s stationed at Amari, Estonia.

Deployment of VILKAS Detachment Personnel

On January 3, the act of bidding farewell to the first relief of the Air Force personnel that will form part of the VILKAS detachment, within the framework of Operation Baltic Air Policing, took place at Albacete Air Base.

The contingent is made up of 105 military personnel, as well as one other staff member, and it belongs mainly to the 14th Wing.

It will unite with those that left from Spain with Siauliai Air Base, Lithuania, as their destination on December 27.

The objective was to reach full operative capacity on January 8.

This is the third time that the Air Force has participated in this mission. From August 1 to November 30 2006, it did so from Lithuania and as the lead nation, with four C.14 Mirage F-1s from the 14th Wing.

Later, from January 1 to May 4 2015, and with four C.16 Eurofighters from the 11th Wing, they carried out operations from Amari Air Base, Estonia. The Eurofighters from the 14th Wing will lead the missions during the first quarter of 2016: this time from Lithuania.

In total, approximately 230 personnel will form part of the detachment in the four months that the mission will last. Half way through it, a relief of crews, controllers, health workers and maintenance staff will take place.

The event was presided over by the Chief of Staff of Air Combat Command, Division General César Miguel Simón López, on behalf of the Chief of Staff of the Air Force, Air General Francisco Javier García Arnaiz. General Simón, who was accompanied by the Head of the 14th Wing and Albacete Air Base, Colonel Julio Nieto Sampayo, offered Christmas greetings to the members of the contingent and their families in the name of the Chief of Staff.

He also expressed the wish that the detachment's tasks will pass without event.

Echoing the recent words of the President of the government, the general also reminded the attendant personnel that they are the "best ambassadors for Spain" outside of our borders.

Baltic Air Policing

"Baltic Air Policing" is a NATO mission framed within the principle of collective defence. It has as its aim the protection of the air space of the Baltic countries that lack their own resources to carry out air policing tasks.

(Also see, <http://sldinfo.com/spain-takes-over-air-policing-mission-in-baltic-states/>).

We had a chance to discuss this mission with Captains Antonio Duque Polo and Sergio Martínez Pérez during our time at the base.

The 2015 mission was conducted in Estonia; the 2016 mission was done in Lithuania.

This year, the winter was especially cold and provided challenges for operations.

But another challenge was provided by the difference between the two bases.

"In Lithuania, we had two shelters from which to operate aircraft.

Obviously, given the extreme cold, we could not work on the aircraft outside, but needed to prepare them inside; the situation is different from Estonia where there are more facilities to operate our aircraft."

Captain Duque noted that the first six weeks of the mission involved the set up by the support crews of their structure to support the Eurofighter as well as working with the back up flight crew for the mission, which was provided by the Hungarian Air Force flying Gripen fighters.

It was noted that the Spanish Air Force operated with their normal uniforms, rather than special winter gear, which added to the challenges as well.

But the Eurofighters performed well and according to Pérez the support structure also worked well.

“We had a baseline established from earlier engagements to determine what we needed on the supply side for our Eurofighters.

These forecasts worked well. And with our Spanish digital logistic system we were able to order parts directly from Lithuania back to Spain to support the mission as well.”

Obvious, difficult conditions challenge any air combat asset.

A key challenge which they faced was the need to have well salted runways to operate the aircraft.

And the combat jets would kick up material from the runway into the landing gear areas and pose a challenge of diffusion of Foreign Object Debris or FOD within the aircraft.

“We worked hard on this challenge and found ways to deal with it during the mission,” commented Pérez.

When asked about cross-talk among those Eurofighter squadrons had operated in the Baltics before them, both officers indicated that the experience of the Spanish squadron at Moron Airbase was a key baseline for them.

They also talked with German and British Eurofighter squadrons to shape their baseline for operational and support expectations.

Pérez underscored the point that for Spain, the deployment to the Baltics was expeditionary and the support structure for Eurofighter performed well in this Baltic mission set.

Touring the Base

After we discussed the Baltic mission, we toured the base starting with the maintenance facilities for Eurofighter at the base.

A simulation system is in place for training purposes.

The simulator is an excellent tool for refreshing training as well but a challenge as Eurofighter gets upgraded is to ensure that the software is upgraded in the simulator as well.

This simulator was described in a press release from Cassidian (now Airbus Defence and Space) in 2013 as follows:

A new Eurofighter flight simulator to be used by the aircrew of the 14th Wing of the Albacete Air Base has been delivered by Cassidian, adding to the two already installed at the Morón de la Frontera Air Base in Seville.

The simulator delivered is part of the ASTA advanced training system. Cassidian has been responsible for all tasks related to the installation and commissioning of this Cockpit Trainer/Interactive Pilot Station (CT/IPS-E) which, together with the Full Mission Simulator (FMS), form the ASTA.

The 19 ASTA systems in service in five of the nations operating the Eurofighter Typhoon combat aircraft – Austria, Germany, Italy, Spain and the United Kingdom – are intended for crew training.

This ranges from familiarisation with the aircraft to actual missions in highly complex tactical environments, using aircraft software code tailored to the simulator to reflect the behaviour of the aircraft and its embedded systems with a high degree of fidelity.

The simulators currently in service at the Morón de la Frontera Air Base have to date clocked up 6,500 hours of simulation including 4,800 training missions.

<http://www.aero-news.net/index.cfm?do=main.textpost&id=379c7098-3065-46c3-b845-55af2cb1d8f8>

With Spain having just received the latest version of Eurofighter, and with the simulator not having been upgraded, training is being done on a two seat Eurofighter which we visited as well on the base.

This version of software is what the British call their Operation Shader ready aircraft, namely the version where ground attack missions are now included in the combat envelope of the aircraft.

A good statement of the shift in capability was provided in an interview with an [RAF 1 \(F\) squadron pilot](#) based at RAF Lossiemouth:

“With Tranche 2, the pilot could type in the targeting information and the plane will then provide the data to execute the strike mission. This capability has been demonstrated in Operation Shader. And the targeting capability was so effective that JTACS actually were calling for the Typhoon/Paveway IV capability on a regular basis.

We had combat mass and significant strike capability which could be delivered rapidly and coalition partners quickly began to pick up on this capability.”

As he described the change in performance and its impact: “We could operate a four ship formation and strike 16 targets in one pass. We never could do that with Tranche 1.

And we provided close air support to our ground forces, and provide information to the ground forces to support their operations, with targeting information provided from the ground maneuver forces, or from our onboard sensors.”

This capability is now coming to the Spanish Air Force as earlier this year the Spanish Eurofighters have been testing their Paveway capabilities as well.

http://www.upi.com/Business_News/Security-Industry/2016/07/05/Spain-drops-first-GBU-48-from-Eurofighter-Typhoon/4941467732913/

One change which would make the simulator a more powerful weapon system for the Spanish Air Force would be to link the Eurofighter simulator in Albacete with the more powerful one at Morón Air Base.

“This would expand our capability to train for more complex scenarios as well enhance the quality of our training.”

We visited two maintenance buildings.

The first was a building where engine maintenance was going on.

The engine for the Eurofighter is as they put it: “a good news story. It is very reliable and very maintainable and a significant upgrade over the engine we had on our earlier combat aircraft, the Mirage F-1.

It is a next generation engine.”

The engine is maintained in a vertical position and the crew can replace modules on the engine for engine repair.

But the bench tests need to be done at Morón Air Base near Seville.

The 14th Wing is hoping to be able to have their own bench test capabilities so that they do not need to send repaired engines forward to Morón Air Base for final verification.

We then visited an aircraft hanger where multiple repairs were underway.

One aircraft involved was a two seat Eurofighter in for its initial major repairs; and other aircraft were going through regular maintenance inside the facility.

A key asset for the Spanish Air Force is the logistics base which is paired with the combat base at Albacete.

Here the personnel are trained to work on the range of aircraft which the Spanish Air Force flies.

“They are a key asset in keeping the force operational.

But a challenge is the aging of the workforce and to renew the workforce.”

Currently, the other key combat aircraft flown by the Spanish Air Force (the Navy flies Harriers) is the F-18. Until the arrival of the Eurofighter, the F-18 was the key combat asset.

But as the Eurofighter has matured, the F-18 role has shifted from an air superiority mission to a ground attack mission. The Spanish Air Force does not fly Tornado, so that the F-18 is moving into this role.

This year, the Spanish F-18s went to Red Flag.

“We have done a great deal of modernization on the F-18 and find a very capable compliment to the Eurofighter. And as we gain experience with Eurofighter, its role is being expanded as well.

The Baltic Air Patrol has been an important mission in this regard,” according to Captain Antonio Duque.

In short, it is clear that the Baltic Air Patrol is an important mission for expanding the capability of European air forces to shape common approaches and capabilities.

For the Eurofighter there is an opportunity as well to shape a support structure, say in Estonia, so that Eurofighter could fly to the crisis and have prepositioned support equipment.

Such a possibility could flow from a key activity, which is ongoing at Albacete, namely the Eurofighter integration effort led by the European Air Group.

<http://sldinfo.com/the-european-air-group-and-typhoon-integration-shaping-a-way-ahead-for-more-effective-operational-impacts/>

As two senior officers at the European Air Group put it in an interview earlier this year:

Lt Col. Schiattioni underscored that “We managed to get the key people for each air force responsible for the standards for their national aircraft to shape a more global approach to standards.

And also important was bringing the maintainers together to share lessons learned and to shape more common maintenance procedures.”

Lt. Col. Lecube emphasized that the program has been very industry driven which meant that the operational commonality was not the center of attention.

“But at the squadron level there has been a growing interest ways to shape more operational commonality.

The Baltic patrolling was a key driver for this approach as well.

With the Spanish and the British e.g. operating together in the Baltic Air Patrol, it is crucial to operate a common SOP in such operations.”

A key achievement clearly is to shape a more common SOP for operations and maintenance which, of course, will become even more important as the Tranche 3 standard comes into play for the Eurofighter nations.

Underlying the new approach is a broad agreement reached many years ago where the seven Eurofighter nations agreed to broad ways to work together but the EAG as in other areas is focused on driving practical solutions.

Lt Col. Schiattioni added: “The sharing of information can provide a better way to underscore how each nation can pursue modernization but sort out which among the Eurofighter nations is interested in a solution generated by a particular nation.

This will allow national, bi-national approaches which can drive innovation for the larger Eurofighter enterprise.”

It is clear that the Spanish Air Force is operating under fiscal constraints, but it is also clear that the squadron leadership is working innovative ways to ensure that the optimal combat capability can be generated within those constraints.

Note: In this piece published by the El Pais about last year’s Baltic Air Patrol, a number of points are made about the mission.

Defense Minister: “We’re not here to create problems, we’re here to avoid them”

About 3,200 kilometers separate the Morón de la Frontera base outside Seville and the Ämari Air Base in Estonia, not to mention around 30 degrees in temperature.

Nevertheless, the Baltic republic’s brutal -15°C weather has not hampered Spanish Eurofighter Typhoons from their duties protecting the region’s airspace. Planes from Group 11 of the Spanish Air Force have been in control of NATO’s Baltic Air Policing Mission (BAPM), based in Ämari, since January 1 and will continue there until May 4.

So far, the Eurofighters have conducted 108 patrols, clocking up nearly 200 hours of flight time. Only one flight had to be canceled because of technical problems.



“It has been better than we thought,” said Lt. Col. Enrique Fernández Ambel, who is heading the team of 115 Spanish officers of the Ambar detachment.

But the fears are real and the tension exists. NATO is concerned that the conflict may spill over from Ukraine, where the Kiev government has been fighting pro-Russian separatists.

Along the icy waters of the Baltic, two old Cold War adversaries can look directly into each others’ eyes at distances sometimes as close as 300 meters – that is how near Spanish Eurofighters have come to Russian aircraft during the interceptions that have taken place.

These testy encounters have occurred about half-a-dozen times when Russian Ilyushin and Antonov transport planes – modified for spying or electronic warfare – fly from St Petersburg to the Russian enclave of Kaliningrad Oblast, which is sandwiched between Lithuania and Poland.

Although the Russian jets have not violated Baltic airspace, they ignore international air navigation rules by not filing a flight plan, turning off their transponders so they can’t be identified, or refusing to communicate with civil aviation authorities.

The Spanish Eurofighters usually intercept and escort them under the orders of NATO’s Combined Air Operations Center (CAOC), based in Uedem, Germany.

Commander Eladio Daniel Leal said the tensest moments usually occur when the alarm goes off and “you just don’t know who you are going to encounter, or how they are going to react.”

NATO has been helping the Baltic nations patrol their airspace since 2004 as none of them has an air force of their own. Member countries take turns leading the mission.

But since the Ukraine crisis, NATO has beefed up its patrols. Besides the Spanish EF-2000s, fighter jets have also been dispatched from Italy, Poland and Belgium.

In a tense war of nerves, any wrong move can turn into a catastrophe. According to NATO figures, more than 400 interceptions of Russian planes by the Alliance's jets occurred last year – more than double the number in 2013.

Although the Russian jets have not violated Baltic airspace, they ignore international air navigation rules

And each day the Kremlin is getting bolder. Last month, two Russian Tupolev Tu-95 bombers ventured as far as the English Channel, setting off an emergency dispatch of British and French jets.

The Norwegian government released a video that showed how an F-16 fighter nearly collided with one of the Russian bombers. But the biggest risk is that of a commercial jet getting entangled in these dangerous standoffs.

“We're not here to create problems, but instead we're here to avoid them,” said Spanish Defense Minister Pedro Morenés, who visited the detachment in Åmari on Wednesday.

The Spanish government is spending €9 million on having its four Eurofighters take part in the BAPM and hopes to repeat the mission next year.

http://elpais.com/elpais/2015/02/19/inenglish/1424342029_255173.html

The featured photo shows a Spanish Air Force Eurofighter involved in Baltic Air Policing.

This article was first published on November 18, 2016.

Chloe Laird assisted with the photos, and the translation in the preparation of this article.

QRA and Australia

05/26/2018

Aircrew from No. 1 Squadron, will be providing a quick reaction force as part of the Australian Defence Force (ADF) support to the Queensland Government for the 2018 Gold Coast Commonwealth Games.

F/A-18F Super Hornet aircraft will be on alert to respond to any incursion of the airspace for the duration of the Commonwealth Games to ensure the safety of the athletes, delegates, visitors and people of the Gold Coast.



The Super Hornet aircraft are from No. 1 Squadron, Royal Australian Air Force (RAAF) based at RAAF Amberley west of Brisbane.

The ADF's support to the 2018 Commonwealth Games is part of the Whole of Australian Government contribution to the security of the Games.

Defence has extensive experience providing security assistance to major national events including the G20 Leaders' Summit in 2014, the 2000 Sydney Olympics, the 2006 Commonwealth Games in Melbourne, and other major sporting events.

Australian Department of Defence

March 26, 2018

The featured photo shows a Royal Australian Air Force No 1 Squadron F/A-18F Super Hornet takes off from the runway before conducting a flyover mission in support of the 2018 Gold Coast Commonwealth Games. Credit; Australian Department of Defence.

This article was first published on April 5, 2018.

QRA and the RAF: Intercepting Russian Bombers

05/26/2018

RAF Quick Reaction Alert (QRA) Typhoon aircraft scrambled from RAF Lossiemouth to monitor two Russian planes approaching UK airspace on January 15, 2018.

According to an article on the Ministry of Defence website:

The Russian Blackjack Tupolev Tu-160 long-range bombers were not talking to air traffic control, making them a hazard to all other aviation.

The RAF worked closely with NATO partners to monitor the jets as they passed through a variety of international airspace, before they were intercepted by the RAF in the North Sea.

Subsequently, our fighters escorted the Russian Blackjacks north, out of the UK's area of interest. At no time did the Russian bombers enter UK sovereign airspace



Defence Secretary Gavin Williamson said:

“The threats this country faces are intensifying and we will not hesitate in defending our skies from acts of aggression.

“Our excellent RAF tracked the Russian aircraft every step of the way, and they continue to police UK and international airspace every hour of every day, to help keep the British people safe.”

RAF QRA was launched today because the Russian Military aircraft were not talking to air traffic agencies.

The RAF routinely intercept, identify and escort Russian aircraft that transit international airspace within the UK's area of interest and continue to be on call; 24/7, 365.

<https://www.gov.uk/government/news/uk-fighter-jets-intercept-russian-bombers-approaching-uk-airspace>

This article was first published on January 30, 2018.

The Perspective of Lt. General Kim Jäämeri

05/26/2018

By Robbin Laird

My last official interview in Finland during my visit to Finland in February 2018 was with the former head of the Finnish Air Force and now Deputy Chief of Staff, Strategy for the Finnish Defence Forces, Lt. General Kim Jäämeri.

In my discussions in Helsinki, I was increasingly persuaded that a number of core foundational elements in the Finnish approach were very symmetrical with the changes unfolding in 21st century military technology and changes in approach which most liberal democracies needed to make as we shift from the land wars to higher tempo operations.

The mobilization focus of Finland which I discussed with Jukka Juusti, Permanent Secretary Defence, was one aspect.

The other which I discussed with Lt. General Jäämeri was distributed ops.

Clearly, a number of key aspects of military technological change are underscoring greater capabilities for force generation in terms of distributed operations and shaping C2 systems which can support mission command approaches to directing a distributed force are part of significant change going on in the U.S. military as well as other allied militaries.

But for the Finns, distributed operations is in their defense DNA.

They have been living under the threat of missile and air strikes for a long time and have never assumed that you operate from fixed bases alone as crises strike.

Dispersion and distributed operations are at the heart of how best to deal with a significant offensive threat.

And in major exercises like Arctic Challenge, the Finns are demonstrating how their legacy approach is informing their way ahead and how it can be modernized as new systems are being added to the liberal democratic force structure.

Lt. General Kim Jäämeri: "It is becoming clear to our partners that you cannot run air operations in a legacy manner under the threat of missile barrages of long range weapons.

"The legacy approach to operating from air bases just won't work in these conditions.

"For many of our partners, this is a revelation; for us it has been a fact of life for a long time, and we have operated with this threat in the forefront of operations for a long time."

What clearly is new or evolving is the key role of exercises for Finland and the cross-learning which comes for both Finland and its exercise partners.

Finland passed legislation last year which allows Finland to both provide and receive military assistance which provides the legal framework for shaping ways ahead in exercising with other militaries and shaping cross learning in the military operational domain.

Lt. General Kim Jäämeri: The legislation has brought logic to our exercise structure.

“It also clarifies how the European Union Treaty 42.7 would be practically executed; if someone asked for assistance, then now we have in place the procedures and structures to take proper decisions to provide for assistance.”

With the enhanced concern about the military situation in Europe after the events in Crimea obviously there has been enhanced focus within Europe on territorial defense.

With the Finns, this has clearly seen a renewed emphasis on force readiness and an ability to act more effectively in a crisis.

Lt. General Kim Jäämeri: “We have enhanced our focus on crisis management and the role of the military within overall crisis management.

“We have increased our investments in force readiness.

“With regard to our partners, their enhanced focus of attention on defense, whether it be the actions of Sweden, Norway or Denmark in the region, or by the United States within NATO with regard to the EDI-related investments, has been appreciated.

“And as we expand our exercise regime, we are cross-learning with regard to capabilities necessary for our defense.

“You have to leverage your partnerships more to enhance crisis stability.”