

# M I L I T A R Y LOGISTICS I N T E R N A T I O N A L

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**Feature: Sea Basing**  
**Feature: Logistics Delivery By Air**  
**French Aviation Support**



# AERONAUTICAL SUPPORT AT THE FRONTLINE

**M**LI held a Round Table of the key players in Air Force logistics/support reform in France. Murielle Delaporte talked to: the Ingénieur Général de l'Armement Louis-Alain Roche, head of the Mission of Modernization of Military Aeronautical Equipment's readiness (*Mission de Modernisation du Maintien en Condition Opérationnelle des Matériels Aéronautiques de la Défense* - MMAé -), his deputy, Colonel Guy Benquey, and General Denis Guignot, Chief of Staff of the newly formed (as of 1 January 2008) Command for the Support of Aviation Forces (*Commandement du soutien des forces aériennes* - CSFA).

France's Defence Minister, Hervé Morin recently stated that one of the main objectives was to improve the, "ratio between operational forces and support". Gen Guignot tells *MLI* that this is easier said than done, since no one in France seems to really agree on the definition of such a ratio. Not only does it vary with the type of mission, but the definition of "logistics and support" differs by service. As General Guignot says, "all that does not carry a gun belongs to support."

But in practice the definition has evolved. "Traditionally, the doctrine of 'logistics will follow' has been the *modus operandi* of French armed forces since 1975," says Colonel Benquey. "By and large, French forces tend to deploy fewer logisticians on the ground than their Anglo-Saxon counterparts. But everything depends on the context of the operation: the Navy often operates off its aircraft carrier – a genuine floating base, which has its own logistics and repair facilities. But this has nothing to do with an Air Force detachment, flying aircraft from an austere base such as Kandahar, where everything – or close to it – has to be brought in, and the logistic supply chain has to be maintained."

He explains that in Kandahar, the current ratio is 60 logisticians for 150 combatants, two-third of them being mechanics and one-third being in charge of the infrastructure. Basic support is increasingly outsourced locally.

The accumulation of long-term missions in areas such as Africa and Lebanon has openly stressed the weaknesses affecting French logistics capabilities. All on-going reforms are now aiming towards a rationalization of force management and a

concentration of available means to allow for a military recapitalization. Indeed, last November Hervé Morin identified the following three major criteria of change: operational requirements, well-being of military personnel, and a new concept of support to be "intensified and combined".

In many ways, because of the tension between operational tempo and a growing inability to maintain the level of readiness for equipment, logistics and support have been in the past years been forced to restructure along three major axes: favouring a joint approach; combining resources; and looking for optimum solutions such as outsourcing, international cooperation; etc.

This is especially true as far as military aeronautics is concerned. So this is why *MLI* looked at how reform and transformation was unfolding in France's aeronautics sector. This looks at the action of the MMAé mission on the one hand, the reorganization of the French Air Force and the establishment of the CSFA on the other. Although fundamentally different as much in their mission as in their status – the first has a five-year mandate; the second is part of an internal restructuring of the Air Force Command – both organizations have independently reached the same conclusions about the need to fully redefine and rationalize the support efforts in France.

## REFORM: DRIVEN BY NECESSITY

Whether in France or elsewhere, logistics have often been sacrificed for the sake of more urgent or "sexier" military priorities; with crises playing the role of catalyst in generating changes and/or an increase in means in this area. And strangely, recent conflicts do not seem to have acted as a catalyst on French logistics organization.

Contrary to what happened in the United States, the first Gulf War, for





instance, did not bring much structural change, but affected very specific procurement areas such as the level of munitions stocks, the acceleration of space programmes, and improvements in medical evacuation procedures in case of a chemical attack.

The pressure for logistics reform itself came from the realization that the level of readiness of the support forces was falling behind a level acceptable for deployments. This new awareness occurred at the end of the 1990s and early 2000s. Indeed, as a result of declining defence budgets as well as a shift in the way support expenditures were accounted for, the level of readiness of France's overall air capabilities reached its lowest at the time, which affected not only deployment capabilities, but also the morale of the rank and file already experiencing a major transformation through the ongoing process of professionalisation.

### REFORM ON A JOINT BASIS

With the decline of readiness threatening the ability of France to conduct operations, a series of measures were undertaken earlier this decade. A new joint structure – the SIMMAD (*Structure Intégrée de Maintien en condition opérationnelle des Matériels Aéronautiques du ministère de la Défense*: the Integrated Structure for the Maintenance of Ministry of Defence Aeronautic Equipment) – was created. This new structure brought availability rates – called “MCO” (*Maintien en Condition Opérationnelle*) – back to acceptable levels by 2005.

However, the steadily ageing tactical transport and support fleets – an average of 26 years for tactical transport aircraft, and 44 years for tanker aircraft – has meant that availability rates have declined to as low as 59% by 2007.

Upon her arrival as the then Defence Minister, Michèle Alliot-Marie put an end to the period of budget declines and ordered a series of audits. All pointed out to the necessity of re-organizing the MCO, a complex system functioning with multiple actors. It is in this context that the MMAé was set underway in 2005, a five-year mission lead by IGA Roche and aimed at completely re-

### Availability Rates For French Aircraft 2000-06

Aircraft	2000	2001	2002	2003	2004	2005	H106
Mirage 2000 B/C	66%	68%	66%	70%	66%	59%	51%
Mirage 2000/5F	66%	68%	58%	65%	59%	53%	56%
Mirage 2000D	67%	63%	55%	55%	57%	54%	51%
Mirage 2000N	58%	63%	57%	68%	69%	70%	66%
Mirage F1B	58%	58%	38%	60%	72%	62%	71%
Mirage F1CR	63%	60%	68%	63%	69%	56%	56%
Mirage F1CT	59%	51%	61%	62%	70%	65%	63%
C-160	52%	56%	57%	57%	55%	53%	63%
C-130	64%	65%	48%	49%	64%	74%	68%

assessing the MCO in military aviation. The approach has been joint, since the goal is to improve the management of the fleets of the three services, the security forces (*Gendarmerie*), the DGA and other ministries. In total MMAé is dealing with some 1,800 aircraft, a budget of €4 billion and about 27,000 personnel. MMAé aims to tackle:

- Better matching of resources to requirements
- Mastering of costs and performance
- Reinforcing the effectiveness of support on operations
- Improving and rationalizing the relationship with contractors
- Improving maintenance
- Mastering logistics and data flow.

### NEW AIR STRUCTURE

Whereas MMAé is a process tackling immediate logistics and support issues, the Command for the Support of Aviation Forces (CSFA), which became operational on 1 January, 2008, is the result of the general reorganization of the Air Force commands and the “*Air 2010*” project. It is a structure more devoted to the longer term aviation support picture.

Between 2004 and 2006, a commission of nine officers representing each major Air Force “pole”, or capability – General Guignot represented the “support pole” – regularly met to identify the best way to reform the service, as well as to fill out some of the gaps between the French Air Force and its NATO counterparts, and to proceed to a reduction in the size of the service in



The C-160 Transall is the backbone of France's air transport fleet. But it is also ageing, and becoming more difficult to maintain.





*Technology in support of the French Air Force's newest arrival, the multirôle Rafale has helped transformation of support for the aircraft. The service has been able to streamline Rafale maintenance procedures, with fewer mechanics required per aircraft, and with more cross training.*

correlation with the decreasing number of planes available.

The CSFA is structured into five distinct brigades reflecting five major categories of capability:

- Maintenance
- Information and communication systems
- Infrastructure
- Personnel support
- Logistics.

The other four “poles”, or new commands established as a result of the same process are:

- The CFA – *Commandement des Forces Aériennes* (Air Force Command), overseeing the use of the Air Force
- The Operations Command, which is plugged directly into the joint CPCO (*Centre de planification et de conduite des opérations* – Centre for Planning and Organization of Operations)
- The DRHAA, or HR business area (*Direction des Ressources Humaines de l'Armée de l'Air*)
- The “Training Pole”.

## TOWARDS RATIONAL SUPPORT

The French Air Force rationalisation moves are occurring at the same time as defence-wide support is also looked upon in a far more “joint” manner

than has been the case to date. The current Defence Minister, Hervé Morin, has recently stressed the increase in “integrated ground-air-sea-based operations”, which requires common logistics as a result. And he also pointed out the disjointed nature of support in areas such as the EC725 SAR helicopter, used by both the Army and Air Force, but for which there were different maintenance procedures and skill sets!

And technology is also playing its part in how maintenance of air systems is undertaken. Elements of automatic testing and diagnostics are being introduced into air systems at the design stage, a major advance, and better component reliability has also helped to reduce the number of maintenance actions being undertaken.

The core of the future Air Force, the Rafale, has also brought quite a bit of change. The increased number of automatic test systems has meant that mechanics are trained to be more flexible in the tasks that they undertake, and fewer are needed to maintain a single Rafale. Also, the engine is more modular, which simplifies support actions, and also allows for sub-systems and parts to be moved between engines, in a legitimate cannibalisation process.

Colonel Benquey describes, in particular, the advantage of having an on-board oxygen generation system on Rafale, which solves a classic logistician's headache. With older generation aircraft operating in Africa, it is still necessary to plan for a

complicated, and difficult to handle, re-supply of oxygen bottles.

As a result of these factors, the maintenance process is currently being simplified and reduced down from three to two echelons. There were historically a first echelon on the ground, a second one on the air bases, and a third one in an industrial facility. Now maintenance and repair are performed according at two levels: operational and industrial.

The operational level includes the former NTI1 and part of NTI2 maintenance stages, and is conducted exclusively by military personnel. The industrial level includes part of NTI2 and NTI3 and is performed by the public sector (both military and civilians) and increasingly by the private sector. To further rationalize the intervention of state actors, a new organization aimed at rallying all of them under the roof of a single entity has just been established under the authority of the Air Force Chief of Staff. Operational since 1 January, 2008, the SIAé – *Service Industriel Aéronautique* – receives from now on all orders from the SIMMAD to be dispatched to each state maintenance facility.

These state facilities are as a result starting to undergo a process of geographic concentration: the industrial maintenance of engines has, for instance, begun to be re-localized in Bordeaux, while the Mirage 2000 will be exclusively maintained in Clermont-Ferrand. The 2008 budget request describes the creation of the SIAé “according to a logic of rationalization and savings”, and announces the upcoming re-grouping of facilities.

Such a concentration of sites does not spare warehousing: all helicopter spare parts for all services are to be centralised. In addition, a reassessment and reduction of the spare parts stocks inherited from the Cold War are under way. One of the key issues being to assess the real value of such stocks, currently estimated at €16 billion.

This process of contraction of the Air Force base structure is expected to affect the Air Force military map as a whole: a “French BRAC” is indeed to be officially announced in the coming months. For General Guignot, this restructuring, both at the command level and in the field, has already proven



beneficial by reducing the compartmentalization of the support process and establishing a system rewarding responsibility and staff motivation. He cites as an illustration the case of the poor readiness of the C-160 Transall, which was believed initially to be mostly due to a problem of spare parts. After an audit, it turned out that the issue was more a question of management and burden-sharing than parts availability. The result was that in four months, the number of operational Transalls jumped from 23 to 33.

## THE OUTSOURCING CHALLENGE

French experts point out that outsourcing – *externalisation* in French – already affects many of the budget allocations for support, and that the best cost-productive solutions are increasingly being favoured. Since last December for example, the maintenance of the French Air Force's three A-310s is not being done by Air France any more, but by Sogerma Service.

In order to use civilian industrial capabilities on the ground, a legal framework has been set up since 2004 allowing to hire industry personnel as reserves. Even though France does not have the same flexibility in this area as the United Kingdom or the United States, this is the way some companies, such as Thales, Dassault and MBDA in Afghanistan and Tajikistan, can work side-by-side with French active-duty forces in a form of CONDO.

Officials hence believe that outsourcing will grow in the near-future, but they also stress the necessity to retain some core industrial capacities. The fear is in particular to either face the inability of industries to match an emergency request or to see the prices go to the roof in case of a crisis.

The extent of the outsourcing process is defined by the Chief of the MMAé mission, IGA Roche, as "*all which does not internally justify new investments to preserve national competencies*". Fighter aircraft belong to these core competencies, which explains Dassault's marginal role in their maintenance at this point. It is also the case for certain types of helicopters such as the Tiger and later on the NH90. For multinational programmes such as NH90 and the A400M, the hope expressed in the

2008 Budget is that support will be performed on a combined basis by the international participants.

Another criteria for outsourcing, from the MMAé mission's point of view, is the one of European preference. In 2000 for instance, in spite of the resulting closing of the Sogerma facility (EADS subsidy) in Mérignac, it was decided to move the maintenance of French C-130s to Portugal's OGMA. Such a "globalization of support", as logical as it seems, does not appear to be continuing as rapidly as one could expect. The reason lies in the lack of willingness of each nation to lose its autonomy in support.

Paradoxically, better international cooperation existed thirty years ago for the support of programmes such as the Anglo-French Jaguar fighter bomber, the Franco-German Atlantic maritime patrol aircraft, and the Franco-German Alphajet trainer. IGA Roche recalls that "old habits die hard", and uses as an illustration the case of the Franco-German helicopter flying school created in 2003. He describes it as a, "bi-national integration laboratory" located in France. But in spite of the commitment to co-develop the attack helicopter, there are no obvious signs of the degree of support integration: the spare parts stocks are not shared, nor is the maintenance process.

But there are signs of hope, as the next generation of French and German mechanics and technicians for the Tiger is being trained together in a common centre based in Fassberg, Germany, the CFA-PTL (*Centre de Formation Franco-Allemand pour le*

*Personnel Technico-Logistique du Tigre*). This might act as a blueprint for future cooperation on aeronautics support.

## THE CHALLENGE OF TRANSITION

Logistics, once a very ignored topic in French defence, is now firmly back in the limelight, as reforms of major defence structures show. And it is not just structures that are changing. The *Institut Supérieur Aéronautique*, the aeronautics university, is awarding a Masters in Logistics degree for officers, a sign of how seriously logistics and support are now regarded.

But the process is far from over or finished: the process is very much "work in progress". One major concern is that the process of reform could end up damaging processes of support and maintenance on the ground which actually work well, even if they do not fit the new support template. The is also a fear that the drive to "joint" working could introduce a more complex bureaucracy, too.

But the biggest variable is the budget available for support. Although it has been raised upwards compared to the late 1990s, it is still at risk of being "raided" for other tasks. And if this is the case, the delicate chain between the services and the military could be badly affected.

France is in a period of transition not only economically, but also militarily with the full reconfiguration of the means, structures, bases and footprint of its armed forces underway – and the aeronautical support sector is at the cutting edge of the whole process. ■



The SNECMA M88 engines of the Rafale are easier to maintain than earlier models. Modularity allows parts to be swapped between engines.