Nuclear Policy Paper No. 15

Jean-Marie Collin

The Role of NATO in the French White Paper and implications for nuclear arms control

Introduction

By fully reinstating France into the military command structure of the North Atlantic Treaty Organization (NATO) in 2009, then-President Nicolas Sarkozy wished to conclude a process that had begun in the early 1990s, with François Mitterrand and Jacques Chirac in 1995 having had initiated the first reconciliations. The purpose of this return to the Alliance - after the withdrawal made in 1966 by General De Gaulle - is much more political than military. Hubert Védrine’s famous phrase: "friends, allies, not aligned", still defines the relationship between France and NATO. Moreover, it is essential to keep in mind the fact that France, despite its return to NATO’s military command, is the only ally out of 28 not a member of the Nuclear Planning Group (NPG).

All of these political and military elements about France and NATO are found throughout the new French White Paper on Defence and National Security1 (LBDSN). Among the major strategic concepts mentioned in the Paper, nuclear deterrence is of course reaffirmed as a central element of France’s security.

Following the previous White Paper’s continuity, a virtual deadlock is observed on topics related to nuclear arms control, nuclear disarmament and NATO tactical nuclear weapons, which nevertheless directly affect the security of France and the rest of Europe. Lack of an official position on these issues in such a strategic document proves the existence of a French timidity.

This paper examines the relationship that France has with NATO, particularly through its policy of nuclear deterrence in a European context, and also during a time when tactical nuclear weapons are less and less accepted by the international community.

Functions and role of a white paper

France is undoubtedly one of the major military powers of the world. It has the third...
largest nuclear arsenal (300 warheads) after Russia and the United States, it is unilaterally able to carry out conventional military operations (as in Mali), and possesses its own command and control and satellite capabilities. It has thus held a major role in most crisis resolutions (as in the Republic of Georgia in 2008) and military operations over the last twenty years (Kosovo, Afghanistan, Ivory Coast, Libya). The latest French White Paper outlines these nuclear and conventional military capabilities, recent military operations, command structures, and more generally, its defence policy.

The publication of this document is a rare process; the decision to make a new one is taken only by the President. Only four White Papers have been published since the first issue in 1972. Clearly, the first Paper was published with the aim of generating political will to help build support for the theoretical bases of nuclear deterrence. At that time France had implemented its nuclear submarine component in addition to its air component (in operation since 1964) and the land-based component (operating since 1971). The second White Paper published in 1994 was justified by the end of the Cold War and the agreement to use conventional military capabilities for external action, which was at the heart of the defence doctrine. The third White Paper, commissioned by President Sarkozy in 2008, came after September 11, 2001 when there was more awareness around the threat of international terrorism. The innovation of this White Paper was to add a strategic function, which binds “defence” and “homeland security” together. Therefore, since that date, the document’s full formal name has been: “The White Paper on Defence and National Security”.

In July 2012, President Hollande (elected in May) established a committee to write a new version of the White Paper. Normally, it should have been validated in December 2012. Nevertheless, it was published in April 29, 2013, four months behind schedule. This shows that the drafting exercise was not easy, which was for two main reasons: This White Paper was not conceived in the context of an arrival or disappearance of a new military power, or with a new growing awareness of terrorism’s potential. It emerged out of the tension between the return to power of the left (under François Hollande) after 18 years in the wilderness and the growing demands of austerity caused by the global economic crisis. This White Paper focuses on three priorities for the defence strategy of France: “protection of the territory and the population, nuclear deterrence, and intervention by the armed forces outside the national territory.”

The White Paper does not establish any new laws. It is a document that expresses reflection, proposals or recommendations to the government – mainly to the parliament. “The timeframe for this White Paper is ... a long-term one, extending over some 15 years”, which is typical of French White Papers. In reality, however, the period of 15 years is probably only virtual, as the publication of this fourth White Paper comes only five years after the Sarkozy White Paper (in 2009) was published. In fact, it is primarily a policy and strategy paper with a pedagogic purpose as with many other countries like Germany and the United Kingdom. Finally, the White Paper seeks to validate concepts that were already confirmed (decrease the size of the armed forces, purchase drones), concepts or geopolitical visions which begin to be more present in international relations (like the Arctic issue that appears for the first time in the White Paper, designed as an emerging strategic priority; or the recognition of cyber threats and development of cyber defence capabilities), and finally, strongly reaffirms the concept of defence. The pillar of nuclear deterrence is a perfect example:

• “Nuclear deterrence aims to protect us from any aggression against our vital interests emanating from a State, wherever

it may come from and whatever form it may take". viii

• “The navy will contribute to nuclear deterrence with the naval aviation nuclear force and through permanent nuclear-powered, ballistic missile-carrying submarine patrols.” ix

• “The air force will continue to ensure permanent deployment of the air component of the mission of deterrence”.

However, it is necessary to keep in mind that the Committee in charge of writing this new White Paper was not assigned to work on nuclear deterrence. In the engagement letter, addressed to the President of the White Paper Committee (13 July 2012), President Hollande was very clear: "I have already confirmed the maintenance of our strategy of nuclear deterrence". xi

White Paper on NATO nuclear policy

One month after the publication of the White Paper, NATO Secretary General Anders Fogh Rasmussen, showed the importance that NATO assigned to this document by writing a long article in Le Monde xii:

“The publication of the new White Paper on security and defence is an important event for France. It is equally important for the Atlantic Alliance. [...] Our Alliance of sovereign countries based on solidarity of the Musketeers is so dear to the French: "One for all and all for one!" President François Hollande has just reaffirmed how much France needed a strong defence. I can say from my point of view how NATO needs a strong and driving French defence.”

This kindness reflects the status given to NATO in this White Paper. The document expresses clearly that "[o]ur defence and national security strategy cannot be conceived outside the framework of the Atlantic Alliance" xiii and that "[b]y re-

joining NATO’s integrated military command structures, France intended to take back its rightful place in the functioning of an organisation of which it is one of the founding members". xiv

Moreover, Frances’ return to NATO’s military command is highlighted with the "award to a French general officer the post of Supreme Allied Commander Transformation (SACT) allows France to participate actively in the process of renovating the Alliance’s means of action.” xv Admittedly, the appointment of General Jean-Paul Palomerosxvi is very important as great proof of NATO’s (or rather the United States’) confidence towards France, because for the first time since 1949, the Atlantic Alliance entrusts one of its two strategic commands to a non-American.

Like in the previous White Paper from 2008xvii, France displays with great clarity that its nuclear force is completely independent: "The independent strategic nuclear forces of the United Kingdom and France, which have their own deterrent, contribute to the overall deterrence and security of the Allies". xviii A logical policy continuum follows: even if France has fully reintegrated into NATO, it is still not a member of the Nuclear Planning Group - NATO's decision-making authority with regard to the issues of nuclear policy. The French deterrent strategy remains faithful to its political line and continues to rely on the Ottawa Declaration of 1974 and the 1999 Strategic Concept.

White Paper and Tactical Nuclear Weapons

Only the 1994 White Paper indicated twice the existence of tactical nuclear weapons. It acknowledged that the Strategic Arms Reduction Treaty II (START II) agreement would have a positive impact on the reduction of strategic nuclear weapons between the United States and Russia, but that "the development of so-called ‘tactical
nuclear weapons’ is more difficult to assess, because it does not have a contractual treaty”. A few paragraphs later, it stresses again that this type of weapon will be difficult to remove as “international attention has focused on strategic weapons instead of tactical weapons”.

The White Paper of 2013 mentions neither the place, nor the role, of U.S. tactical nuclear weapons stored in Europe in the framework of NATO; nor the Russian tactical nuclear arsenal. It confirms only a very strong will that France wanted to see absolutely inscribed at the Chicago Summit: “the Strategic Concept which reaffirms the role of nuclear weapons as the supreme guarantee of security and pillar of the Alliance’s defence doctrine”. This is the White Paper’s only sentence about nuclear weapons in NATO, and reflects France’s spirit of continuity and rationale for these weapons.

It would be intriguing, however, if compliance with this logic could be broken with the publication of a new report, for example, in an annex to the White paper. With the arrival of the new President in May 2012, and the presence of many Green and Communist Parliamentarians, is it possible that the French position could evolve and become more favourable for, or at least abstain from, all declarations against the withdrawal of tactical nuclear weapons in Europe? Each part of every speech, message, or any other event should be deeply evaluated to understand the situation of nuclear weapons in France, a country where the taboo on this subject has very deep roots.

If the White Paper does not mention tactical nuclear weapons, it does not mean that the Committee, which wrote this strategic document, did not discuss the issue. Indeed, among the list of participants who worked on the White Paper included Hubert Védrine, former Minister of Foreign Affairs. On 18 July 2012 (five days after the creation of the Committee of the White paper), President Hollande appointed H. Védrine to “present an assessment of the consequences of France’s return to NATO’s integrated military command and to suggest ways in which France could exercise greater influence within the Atlantic alliance”. On 14 November 2012, he submitted to the President his report: “The consequences of France’s return to NATO’s integrated military command, on the future of transatlantic relations, and the outlook for the Europe of defence”. An official statement indicates that the President has “largely approved the report’s conclusions” and that President Hollande “asked for the report to be forwarded to the Commission responsible for drafting the White Paper on Defence and National Security, chaired by Jean-Marie Guéhenno, for the furtherance of its work”.

All commentators have focused on the fact that this man, in the past hostile to the reintegration of France into the military Alliance; now advocates a strengthening of the influence of France. For example, he recommends the promotion of “Europeanising the Alliance” and that a “French, and European industrial strategy is needed within NATO.”

However, for the first time, in this new report, the former Minister of Foreign Affairs Védrine proposed a change of policy: “France, which has always kept her deterrent at the minimum level, must urge the United States and Russia to reduce the number of their nuclear warheads. France has no reason to oppose the elimination of NATO’s last "tactical" or “non-strategic” nuclear weapons, which are outmoded gravity bombs dropped from aircraft. Such a move would do nothing to reduce the Alliance’s deterrent capability.” This sentence is written in the last part of the report entitled: “Recommendations” and for the first time expresses a desire of the majority of European countries and NATO members to have the U.S. arsenal be removed. Therefore, it is quite possible that France could change its position in future discussions. Paris probably will not take an
active role, but should at least remain neutral, so as not to block negotiations on this subject.

A strategic nuclear arsenal, and only a strategic nuclear arsenal!

France has the third biggest nuclear deterrent in the world after the United States and Russia, with an arsenal of no more than 300 warheads, the first in Europe; then followed by the U.S. “tactical” nuclear arsenal of NATO (+/-200 warheads) – B61 gravity bombs assigned to dual capable aircraft, and the British “strategic” arsenal of long-range Trident missiles on its fleet of four nuclear weapons submarines (225 warheads).

The White Paper 2013 incorporates the concepts of nuclear deterrence that were already in place under President Sarkozy. It indicates that, “The nuclear forces include an airborne component and an ocean component whose performance, flexibility and additional characteristics allow the preservation of a tool which, in a changing strategic context, remains credible in the long-term while staying at a level of strict sufficiency.” The concepts found in the White Paper of 2008 are the same: “Our forces will, for this purpose, be articulated in two clearly differentiated and additional components, with the necessary environment for their autonomous implementation and safety. France will continue to maintain the means of preserving these capacities.”

The French nuclear arsenal has two components: the FOST - Force Océanique Stratégique (Strategic Oceanic force) comprises four submarines deploying a total of three missile batches: two of M45 and one of M51 missiles. This practise is not new; France has never produced enough missiles to arm the whole submarine fleet. Each submarine carries up to sixteen missiles, and each missile can be equipped with up to six nuclear warheads (TN75 actually and after 2015 the TNO warhead). The second component is the FAS - Force Aérienne Stratégique (Strategic Air force), which has been equipped with three aircraft squadrons (two on land and one on the aircraft carrier Charles de Gaulle). These squadrons are composed by Mirage 2000N and the new fighter Rafale. The new missile ASMP-A (replaces the ASMP missile in function since 1986) has been declared operational in July 2010. The ASMP-A has improved manoeuvrability, enhanced accuracy and a range of 500 kilometres. It is equipped with a new warhead designated the Tête Nucléaire Aeroportée (TNA).

France’s nuclear posture is based on two types of delivery vehicles: aircraft and ballistic missiles.

Table 1. The French Nuclear Arsenal

<table>
<thead>
<tr>
<th>Year operational</th>
<th>Range (Km)</th>
<th>Warhead x yield (Kt)</th>
<th>Active Warheads</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Land Based aircraft</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mirage 2000N / ASMP-A*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>2 750</td>
<td>1 x 300</td>
<td>20</td>
</tr>
<tr>
<td>Rafale F3 / ASMP-A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 2012</td>
<td>2 000</td>
<td>1 x 300</td>
<td>20</td>
</tr>
<tr>
<td><strong>Carried-Based Aircraft</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rafale MK3 / ASMP-A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 2010</td>
<td>1 000</td>
<td>1 x 300</td>
<td>10</td>
</tr>
<tr>
<td><strong>SLBMs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M45</td>
<td>32 1997</td>
<td>5 000 + 4-6 TN75 x 100</td>
<td>160</td>
</tr>
<tr>
<td>M51</td>
<td>16 2010</td>
<td>8 000 + 4-6 TN75 x 100</td>
<td>80</td>
</tr>
<tr>
<td>M51.2</td>
<td>Under development 2015</td>
<td>8 000 + 4-6 TNO x 100</td>
<td>-</td>
</tr>
<tr>
<td>M51.3</td>
<td>Under development 2020</td>
<td>8 000 + 4-6 TNO x 100</td>
<td>-</td>
</tr>
</tbody>
</table>

*Maximum range of the ASMP-A is 500 kilometers.
France’s vision on tactical and strategic nuclear weapons

Since the dismantling of the Hadès land based missiles in 1997, France has had no ground tactical nuclear component. Its strategic arsenal exists only in definition, in respect to its cruise missile ASMP-A and the sea-ground-strategic ballistic M51. There is, however, clearly a problem of definition. Indeed, for France there are no tactical weapons; only strategic weapons: "The definition of strategic nuclear weapons is fundamentally linked to the doctrine of deterrence of France rather than the technical characteristics which, however important they are, are only the consequences of this doctrine." According to the definition of UNIDIR a tactical nuclear weapon is a "nuclear weapon designed to attack battlefield enemy targets at short ranges. They are delivered by short-range ballistic and cruise missiles, fighter/bomber aircraft and/or long-range artillery." Russia has adopted a very similar definition.

Paris has three reasons to adopt this definition for its nuclear weapons, including its nuclear cruise missile (ASMP-A):

- Paris fears that its airborne component is considered tactical. Russia could request to reduce or to abandon this force in future multilateral disarmament measures.
- Paris does not want to be the lone nuclear state on the European continent. If that became the case, Paris would fear becoming the target of governments (like Germany, Belgium, Norway) and nongovernmental organizations in favour of nuclear disarmament.
- Nuclear forces of France are not assigned to NATO. Therefore, Paris does not want to communicate directly on the status of U.S. tactical nuclear forces stored in four European countries (Belgium, Germany, Italy, The Netherlands) and Turkey.

This posture explains why Paris does not want to comment on the recent speech of President Obama who proposes some new disarmament initiatives, notably on TNW. France fears being forced to justify the existence of its airborne nuclear component.

Perception of France on nuclear arms control initiatives

In President Barack Obama's speech of 19 June 2013 in Berlin, he indicates clearly a will to reach an agreement with Russia to reduce tactical nuclear weapons: "At the same time, we'll work with our NATO allies to seek bold reductions in U.S. and Russian tactical weapons in Europe."

The French Ministry of Foreign Affairs reacted to Obama's Berlin speech exactly in the same manner as to President Obama’s speech in Prague in 2009. On one hand, there was a lack of enthusiasm to these positive announcements in favour of a world without nuclear weapons, and on the other hand, there also was desire to show that disarmament is a priority: "the United States and Russia have a particular responsibility in matters of disarmament, given the size of their arsenals. With several thousand weapons, deployed or in reserve, these two arsenals represent 95 percent of nuclear weapons in the world. The reduction of both of these arsenals is now a priority."

Nevertheless, the crucial point of a new process of action regarding tactical nuclear weapons, which directly concerns the security of NATO (thus of the European Union), was not commented upon.

However, it is possible that France, in the near future, will be obliged to comment on this topic, or even, to adopt its own plan of action. Indeed, the Russian reaction to Obama's speech in Berlin can be an element that will push France in this direction. Yuri Ushakov, a Russian foreign policy adviser, said: "we heard this initial information and made remarks that other countries that possess nuclear weapons must also be included in the process of cutting the nuclear potential. The situation now is not like in the 1960s and 1970s when only the
United States and the Soviet Union held talks on reducing nuclear arms. We now see a larger and extended circle of participants. Many times in recent years, Russia has expressed a desire to engage in multilateral arms control talks with China (mainly), but also with France and the United Kingdom. France does not want this issue to be discussed openly. A study published in 2011 reinforces this conclusion. Based on interviews, many NATO members expressed open and direct criticisms against the French position on nuclear disarmament and more specifically on the future of tactical nuclear weapons: "Sarkozy just wants to be a big player and he needs nukes for that." A NATO diplomat lamented that “France is holding conservative positions on many issues, and will likely trade them off piece by piece in order to keep the nuclear policy the way it is.”

Finally, France is surrounded by countries in favour of a world without nuclear weapons (Germany, Belgium, Sweden, Austria, members of the European Union, Norway and Switzerland). Any open debate about tactical nuclear weapons would inevitably redirect focus on the general place of the French nuclear deterrent within the European policy of defence. Also, France has suffered a failure in the past on this topic by trying to introduce the concept of "concerted deterrence" in 1995. Germany had then rejected all ideas closely associated with French nuclear weapons.

**France, can it go towards a new strategy?**

There are some factors resulting from the current financial, domestic and international relations situation that may influence a shift in the French position on the issue of tactical nuclear weapons and disarmament in general.

1. **Economic crisis**

   Incontestably, there is a change of thought on nuclear deterrence in France. Certainly, new thinking arrives slowly, but it is ever growing. The debate was taboo for a very long time due to the principle of political consensus. All political parties agreed and were in favour of the French nuclear arsenal. This consensus, however, did not exist within public opinion. Today, political agreement seems broken, mainly because of the economic crisis. Even if the defence budget will be the same for the next year (€ 31.5 billions), savings must be made. This means, for example, a reduction in the number of frigates. Thus parliamentarians, who could not express themselves in the White Paper Committee, introduced the idea of the removal of the nuclear air component. The economic implications of this decision would not be felt immediately (300 millions Euros), because this component has been completely modernized. For cons, the economy would be carried on future investments, like the new warhead design, or on the new missile, actually named "missile aéroporté future", where research and development studies have already begun. This is where France would spend a few billion euros. This reflection is far from far-fetched, since it was introduced by Hervé Morin, a Conservative MP (Independent Democratic Union), which is really rare, but even more so because Mr. Morin was previously a Defence Minister under President Sarkozy (2007/2010). He was the minister who modernized this force with new missiles and new nuclear warheads. Thus, as the parliamentarians vote for the defence budget, their importance and role in shaping the policy desired by the government should not be underestimated.

2. **Irrelevance**

   From the moment when a rising number of parliamentarians from all political parties question the cost of the nuclear air component, they intend its cancellation. This shows that they question its military utility in the global doctrine of dissuasion.

   In addition, if the White Paper is genuinely intended to serve as a document of
recommendations that should apply for the next 15 years, the lack of an important concept regarding the role of the airborne component is striking. According to President Sarkozy, the Force Aérienne Stratégique can "send a nuclear warning\textsuperscript{xlvii} to show the determination of France to enforce its vital interests. It means the use of a cruise missile (ASMP before 2010, ASMP-A since) with a warhead of 300 Kt. If the adversary does not understand this "nuclear warning", then France will fire a salvo of 16 ballistic missiles, from one of its submarines. President Hollande has never said that this concept was invalid. He indicated,\textsuperscript{xlviii} however, that the airborne component gives the head of State "alternatives, complementarities and adaptive capacity" in a crisis and that it would be "visible and thus demonstrative."

We can talk of a new role for the airborne component: that of nuclear “parade” - where the goal is to impress an adversary, before giving what the previous president described as a "nuclear warning". According to Paul Quilès, former Defence minister in the 1980s, "the role of the airborne component would be only to parade; to impress an adversary."\textsuperscript{xlix} A role which clearly demonstrates its irrelevance because, "the existence of the airborne component undermines nuclear deterrence, in suggesting that, to make an adversary move back, the SLBM and his missiles would not be enough to deter.\textsuperscript{li} The absence of the "nuclear warning" concept in the White Paper 2013, sometimes called ‘the ultimate warning’, indicates official will to reduce the role\textsuperscript{lii} of this airborne component in the doctrine.

3. International legality
The third element, which suggests a possible cancellation of the nuclear mission for the Air Force, involves the duty of France to achieve disarmament measures under the commitment it took at the 2010 Non-Proliferation Treaty (NPT) Review Conference. This commitment relates to the one France signed during the ratification of the NPT on 2 August 1992, and its article VI where "Each of the parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear Disarmament."

The major difference between the two is that the recent commitment has a deadline.

According to action five of the 2010 NPT Review Conference Final Report, France (and the four others Nuclear Weapons States) must "report undertakings to the Preparatory Committee at 2014\textsuperscript{lii} on concrete progress on steps leading to nuclear disarmament. The cancellation of the airborne component is the only measure of disarmament that France can realize by 2014. This could be achieved by a similar disarmament plan announced in March 2008 by President Sarkozy on the reduction of this component ( Cherbourg speech). In his first and only major speech on nuclear deterrence, he announced a new measure\textsuperscript{liii} for disarmament: “the airborne component, the number of nuclear weapons, missiles and aircraft will be reduced by one-third.”\textsuperscript{liv} The operation of withdrawal and dismantling of 20 aircraft with their missiles (ASMP) and nuclear warheads (TN-81) was spread between 2009 and 2011. According to the annual report of the Commissariat à l’Energie Atomique (CEA), this process had been fully completed on 22 December 2011, with the withdrawal and disassembly of the last TN81 warhead. This means that there first is a statement (March 2008), and that the process of reduction and elimination followed (2009/2011). With such a trend, we can expect the process of reductions of ASMP-A starting soon.

Conclusions
On the observation of these three points between an economic problem, scepticism around utility, and a disarmament obligation, which can bring the dismantling of the airborne nuclear component; the fear of associating this component with a tactical

arsenal disappears. If France dismantles its airborne nuclear component, it will retain complete control of the unilateral process of disarmament: the decision, the implementation of the action, and the timetable. Being associated with a multilateral process of reducing arsenals is a vision Paris refuses to be involved in. This is certainly the reason why H. Védrine recommends agreeing to the removal of U.S. tactical nuclear weapons from Europe.

Moreover, the White Paper, which sets out a general framework, is only the beginning of a process. It must be completed primarily by the Military Planning Law (LPM), which will be voted on in the fall of 2013. Defining the defence budget for the next five years, the law will validate the proposals of the White Paper. However, it is certain that the debates will be more important at this LPM vote, than at its publication. Indeed, the French community of researchers and defence journalists has accepted the White Paper without real criticism. It is seen as realistic, with the implications of the financial crisis like the decrease of the number of fighters from 300 to 225. In reality, criticism has come from former military personnel and former politicians. They typically indicate that the White Paper is based on a non-choice, with defence that will be "degraded and unbalanced" and that it is illusory to think that France will still be "able to sustain nuclear deterrence and conventional forces". The debate in the LPM will take place on the cost of the airborne component, and the savings created by its removal could be realized immediately, and in the future.

In this context, can France make any choices within the process of disarmament of tactical nuclear weapons in Europe and global nuclear disarmament? Certainly it can continue its attitude of obscurantism; However, this position could be very dangerous. Not only could France be faced with a contestation to the majority of NATO members, but also be permanently seen as staying with its usual positions, refusing to implement the recommendations of Védrine, and deciding to keep the current state of its nuclear air component. “the black sheep of nuclear disarmament” by the international community.

This paper was published under the joint ACA/BASIC/IFSH project on “Reducing the role of tactical nuclear weapons in Europe” funded by the William and Flora Hewlett Foundation. More information on the project can be found at http://tacticalnuclearweapons.ifsh.de/

The author is solely responsible for the content.
Endnotes

p2 In the next six years, the Ministry of Defence will embark on further downsizing, albeit much more moderate, in accordance with the new operational contracts approved by the President of the Republic, to comply with the requirement to reduce public spending and meet commitments to rationalise public administration. This reduction will involve approximately 24,000 personnel (White Paper, p. 93).
vi “The reduction in Arctic Sea ice already has strategic consequences” and the archipelago of Saint-Pierre-and-Miquelon “is located close to the Arctic and North Atlantic shipping lanes in an area with substantial hydrocarbon resources. The development of the archipelago and protection of its population require regional cooperation with Canada and its Atlantic provinces that respects the interests of all parties”, White Paper, p. 50.
viii Defence and National Security 2013, Twelve key points, see Point 7 – “Remodelling general strategy and military strategy”, 2013, p. 4.
xvi General Jean-Paul Paloméros is the current Supreme Allied Commander Transformation (SACT). He took up his functions on 28 September 2012.
xxv Ibid quote 24.
xxvi Ibid quote 24.
xxvii Hubert Védrine, “The consequences of France’s return to NATO’s integrated military command, on the future of transatlantic relations, and the outlook for the Europe of defence” Part III. Recommendations, 14 November 2012, p. 21.
This force includes also six Rubis class nuclear attack submarines to protect the aircraft carrier, the strategic nuclear submarines and conduct research and intelligence. The Rubis class is slated for replacing the Barracuda class in 2017.

President Chirac announced in January 2006 that “the number of nuclear warheads has been reduced on some missiles in our submarines.”

This TNO warhead for Tête Nucléaire Océanique is under development and will be integrated in 2015 for the first batch of the M51.2.

This warhead was completely created by the nuclear simulation program. It is the first time in the world that a warhead is being declared operational without a previous real nuclear test.

Hadès was a short-range (less than 500 Km) road mobile ballistic missile, which was in service between 1991/1996. Its role was to shatter Soviet tank columns before an eventual launch of its long-range nuclear weapons.

President Obama at the Brandenburg Gate – Berlin, 19 June 2013.

“Réduction des arsenaux nucléaires, Q&R – Extrait du point de presse du 19 juin 2013”; http://www.diplomatie.gouv.fr/fr/politique/dissuasion

...for example that at the next European Council of Defence (December 2013), the subject of the role, or policy, of the French nuclear deterrent will not be discussed; the same as with the United Kingdom.

Early reflections to replace the ASMP-A (then the warhead TNA) have already begun. The first results are expected by 2015 and the concept selected will then be developed, with the aim of being operational around 2035. Committee of Foreign Affairs and Defence of the Senate, “L’avenir des forces nucléaires françaises”, 11 July 2012.


It may also be underlined that since 1997 France’s British ally has only one nuclear component (submarine), because they understood that the air component, with the fall of the Berlin wall, was nonsense.


The first since 1998 with the total dismantlement of the 18 missiles S3D ground-to-ground component.

v Pierre Lellouche, former Secretary of State for European Affairs.