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The French Navy: Friend or Rival?

Captain William M. Despain, U.S. Navy

An analysis of French naval power reveals a unique set of similarities between French and U.S. Navy strategic commitments and requirements. Conversely, certain elements of French naval power not only compete with, but potentially threaten, U.S. economic and political interests. Is the French Navy a friend or a rival? Is some form of strategic marriage a possibility for the navies of the United States and France, or will French naval power evolve to threaten U.S. national interests, requiring an even greater arm's length policy and wary competition?

On 4 May 1982, an Exocet missile carrying a 364-pound warhead slammed into the hull of the H.M.S. *Sheffield*.¹ The resultant loss of the *Sheffield* not only alerted a shocked Britain to the reality of missile-age naval warfare, but brought to light a curious and heretofore little recognized adeptness in naval power. Both the missile and the aircraft that launched the missile were French-built. With raised eyebrows, observers in world military circles suddenly took note of French naval weaponry and how it was being used. During the Falklands war and the years that followed, it became increasingly evident that not only were many French naval weapons being used by other armed forces of the world, but that the weapons worked devastatingly well.

Then, amid the ensuing hubbub and debate over missiles versus airborne early warning; large versus small-deck aircraft carriers; and submarines versus surface combatants, attention to the French Navy once again lapsed, overshadowed by the Reagan buildup and the cries of "evil empire." After all, traditional military thinking about France generally had been in the context of a land power, not a maritime power, and a fairly independent land power at that.² In the true Mahanian tradition of a maritime strategy, the muscle-flexing U.S. Navy, with its 15 carrier battle groups and its goal of 600 ships, certainly did not require (or desire) any specific reliance on other naval powers for success—least of all on a traditional "land power" such as France.

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As we enter the 1990s, however, the U.S. Navy is no longer thinking in terms of 15 carrier battle groups or 600 ships, but rather is faced with the call to significantly reduce its numbers in both categories. Meanwhile, the French Navy is moving steadily onward with its modernization programs and increased capabilities that include everything from oceanic minesweepers to nuclear aircraft carriers—all supported by a defense budget that has grown more than 7 percent annually since 1986.³

If forward deployment, Alliance support, and deterrent striking power continue to be the mainstays of the U.S. maritime strategy, it may be not only advisable, but necessary, to look anew at the interplay of the Alliance powers in that strategy.

The Elements of French Naval Power

So it was that out of desire to replace Britain as top dog, Bourbon France, placing a large block of irony across the path of history, lent her finances, fighting men and armaments in aid of a rebellion whose ideas and principles would initiate the age of democratic revolution, and together with its drain on the French budget, would bring down the *ancien régime* in the tremendous fall that marked forever the change from the Old World to the modern.⁴

Not perhaps since the days of the American War of Independence has the French Navy enjoyed such preeminence as it does now within the overall defense system of its country.⁵ Inspection of the current French naval order of battle reveals a force in the process of vigorous modernization and oriented toward protecting France's global interests (see French Naval Order of Battle at end of this article). Richard Sharpe states in the foreword to *Jane's Fighting Ships (1989-1990)*, "If the navies of northern Europe seem unable to get their priorities endorsed in the competition for resources with armies and air forces, the same cannot be said of France."⁶

France is investing heavily in naval capabilities.⁷ The French Navy, now with more men than the British Navy has, received a 12.6 percent increase in its 1989 equipment budget. This contrasts sharply with Britain's navy which was recently placed last in service budgetary priorities. There are two forces driving this upward surge in French naval power: strategy and the arms trade.

French Strategy. Not surprisingly, the origins of the naval part of French strategy are deeply rooted in France's intention to remain proprietor of her ultimate security.⁸ After a century of major wars fought in defense of her territory, France pursues her foreign policy goals of national independence, world presence and influence, and solidarity with her allies, regardless of the chafing these singular goals may cause to those allies in terms of a coordinated response to the Soviet threat.

To support those policy goals, France uses her navy in two major ways: as a nuclear deterrent and as a force for conventional action.⁹ In the former role, the navy says that "we do not attempt to win a war, but rather to make it impossible."¹⁰ To this end, the navy has six nuclear-powered ballistic-missile submarines. This is the largest Western fleet of such submarines outside the United States. Completely independent of Nato nuclear response plans, this force maintains at least three submarines within targeting range of Moscow at all times and represents for the Soviets an incalculable "wild card" in any nuclear exchange scenario.¹¹ Aboard its carriers the French Navy also has "prestrategic" forces in the form of air-delivered tactical nuclear weapons, thus providing France with an escalatory capability.

The conventional aspect of French naval power is designed to support numerous and global out-of-area interests.¹² Ranging from their main Indian Ocean base at Djibouti, around to Polynesian possessions, to Caribbean islands and their space center in French Guiana, the French have definite positions, sea lines of communication and trade to protect. Just as most advanced countries, France is heavily dependent on sea trade. Table I shows the percentage of France's raw materials requirements which pass through the Indian Ocean and illustrates particular French interests in that area. To protect and support these interests, the French Navy maintains a true power projection and intervention capability as well as the ability to be "present" around the world. During the most dangerous period of the Iran-Iraq war in the late 1980s, the French deployed a carrier battle group in the Indian Ocean for over twelve months, ranking second only to the United States in number of units deployed in the Persian Gulf at any given time.¹³

**Raw Materials Imported by France
from the Indian Ocean**

Percentage of National Requirements	Product	Country of Origin
100	Zirconium	Australia
96	Tin	Southeast Asia
85	Chromium	Southern Africa Madagascar
55	Rubber	Southeast Asia
32	Coal	Australia South Africa
25	Copper	Southern Africa
21	Manganese	South Africa
16	Platinum	South Africa
30*	Oil	Persian Gulf

*Half of which is transported by sea.

Table I

Source: "The French Military Five-Year Plan," Supplement to *Armees*, 1988, p. 23.

The French continue to build their fleet. During the 1990s they will maintain their strike carrier force, building two new nuclear carriers and replacing carrier-based F-8s and Super-Etendards with their new Rafale fighter. Opting for U.S.-style large-deck launch and recovery mechanisms over short-deck VSTOL technology, the French intend to cover the entire range of carrier activity from presence missions up to and including nuclear strike capability. The French Navy clearly has a global approach, similar in many ways to that of the U.S. Navy.

The French Arms Trade. The global interests that drive French naval activities and harvest a strong and burgeoning naval arms trade are of critical concern to the French defense industry. France has ranked second only to the United States in naval arms sales for the past ten years.¹⁴ Table II shows that over that same period, France outstripped her closest competitor (the Soviet Union) by a margin of almost two to one. Prominent examples of naval export successes include the Exocet and Crotale missiles, a great variety of radars and sonars, the Mirage fighter, and two generations of attack submarines. They have pioneered a market of third-world navies that are far more interested in antiship weapons than in U.S.-style high-technology antiair warfare systems.¹⁵

Value of Exports of Naval Equipment by Major Suppliers Values Are in US \$Million (1985)

	USA	France	USSR	FRG	UK	Italy
1979	1055	1352	1317	250	413	909
1980	2847	1799	1324	506	523	529
1981	2585	2166	716	1010	866	1074
1982	2358	2245	1255	236	1256	839
1983	3024	2197	1323	1137	202	682
1984	1962	2409	875	1905	805	552
1985	2005	2631	832	297	351	289
1986	2229	2648	1359	516	394	253
1987	2787	1598	1246	458	972	141
1988	4004	1413	960	1018	399	327
1979-88	24856	20991	11207	7766	6376	5536

Note: Figures are rounded off.

Table II

Source: Ian Anthony, *The Naval Arms Trade* (SPIRI series *Strategic Issues Papers*), (New York: Oxford Univ. Press, 1990), p. 23.

The French are world leaders in antiship missilery, delivering to more countries than any other competitor. French strategic independence in this field is reflected in its list of antiship missile buyers, not all of whom fall

into the category of U.S. allies (see table III). The unsettling implications of this prolific naval arms trade are no better underscored than by the disabling of the U.S. frigate *Stark* in the Persian Gulf in 1987 by an Iraqi-launched Exocet missile. The lead in antiship weaponry has not only fostered income for France, but the Exocet is a major element in the revolution in naval warfare which provides small ships and aircraft with firepower equivalent to that of large ships.¹⁶

**Recent Air-Launched Antiship
Guided Missile Deliveries**

Buyer	Seller	Designation	Years of delivery	Number delivered
Argentina	France	AM-39 Exocet	1979-86	182
Australia	USA	AGM-84A Harpoon	1976-86	60
Bahrain	UK	Sea Skua	1985-87	24
Brazil	UK	Sea Skua	1985-87	32
Egypt	France	AM-39 Exocet	1982-83	40
FR Germany	UK	Sea Skua	1986-88	50
Greece	Norway	Penguin	1976-81	100
India	UK	Sea Eagle	1983-88	156
India	UK	Sea Skua	1985-88	36
Indonesia	France	AM-39 Exocet	1985-86	10
Iran	USA	AGM-84A Harpoon	1972-75	72
Iraq	China	Hai Ying-2	1987	72
Iraq	France	AM-39 Exocet	1978-88	300
Iraq	France	AS-30 L	1985-88	180
Italy	FRG	Kormoran-1	1980-88	82
Japan	USA	AGM-84A Harpoon	1980-88	100
Kuwait	France	AM-39 Exocet	1983-86	24
Netherlands	USA	AGM-84A Harpoon	1978-84	38
Pakistan	France	AM-39 Exocet	1974-83	72
Peru	France	AM-39 Exocet	1982-87	24
Qatar	France	AM-39 Exocet	1983-84	20
South Africa	France	AM-39 Exocet	1976-80	30
Saudi Arabia	France	AS-15TT	1980-86	220
Saudi Arabia	UK	Sea Eagle	1986-88	200
Saudi Arabia	USA	AGM-84A Harpoon	1986-88	20
Singapore	USA	AGM-84A Harpoon	1985-88	30
Thailand	USA	AGM-84A Harpoon	1987-88	6
Turkey	UK	Sea Skua	1984	36
UAE	France	AM-39 Exocet	1982-84	24
UK	USA	AGM-84A Harpoon	1982	40

This table does not record negotiations or undelivered missiles.

Table III

Source: Ian Anthony, *The Naval Arms Trade* (SPIRI series Strategic Papers), (New York: Oxford Univ. Press, 1990), p. 53.

Additionally, the French are enhancing their naval arms trade by training other countries' submarine crews in exported submarines—a concept once

monopolized by West Germany with her S-209 diesel boats. French-built submarines, sailed by French-trained crews, are now operating in the navies of Portugal, Pakistan, South Africa, and Spain.¹⁷ In 1989 the French courted a number of Southeast Asian countries, including Indonesia, Malaysia, Thailand, and even the Philippines, with submarine acquisition and training programs. What the French offer is a "total package" concept, with outfitting and training programs designed to be technically and economically superior to their competition.¹⁸

Why do the French have this edge in the naval arms trade? It is because their arms industry is deeply intertwined with third-world economies and fueled by French companies. For example, Thomson-CSF, a worldwide electronics conglomerate and the main supplier of weapon systems to the French Navy, ranks fourth in the world in consumer electronics, with a \$6 billion annual turnover.¹⁹ Most significant is the saturation of Thomson equipment in third-world defense systems. One hundred percent of Indonesia's air control system is Thomson equipment. The newest Saudi and Taiwanese frigate radars and sonars are Thomson. Pakistan's submarine combat systems and all of Singapore's air navigation systems are Thomson.²⁰ Thomson employs over 24,000 workers in Southeast Asia—from Singapore to Taiwan. Enlaced in the growing economies of third-world countries, the French have an inside track to armament and defense sales—and, thereby increasing global interests to protect.

The French naval arms trade can work either for or against the U.S. Navy. In the possession of third-world adversaries, such as Iraq, the venomous French-built antiship missiles cannot be ignored. On the other hand, with France as an ally, the secrets of the Exocet are as well known to the U.S. Navy as to the Iraqi air force.

Moreover, friendly countries with French weaponry, such as Norway and Saudi Arabia, can add significantly to coastal and chokepoint protection, alleviating the need for a U.S. presence.²¹

Clouds on the French Naval Horizon

Despite a rosy picture of expanding capabilities in the strategic and conventional arenas of naval power, as France enters the 1990s, several factors may severely challenge her ability to control her maritime destiny.

First, in the arms trade, the French lead in electronics and missile technology is being threatened, particularly by the Chinese. Although Chinese products may not remotely match French performance, many third-world buyers are attracted by the lower cost.²² Before the world trade embargo, which began last summer, Iraq, once a major buyer of French antiship missiles, had already begun to buy Chinese missiles. Consequently, the arms trade, which fueled

the French naval weapons industry, may falter as the competition grows and French shares of the foreign market diminish.

Second, the traditional French policy of developing and producing its own naval weapon systems is beginning to suffer from budgetary constraints, forcing France to turn increasingly to other countries for joint-weapon development ventures and multinational programs. Long a symbol France's independent political and military policy, the defense industry is now accelerating toward the inevitable internationalization of defense cooperation with its allies.²³ Illustrative of this is the U.S.-French program to re-engine C-135 aircraft, as well as the nearly \$1 billion purchase of AWACs and C-130 aircraft by France in 1987. Within the framework of the Nunn amendment, France has opened over one hundred data-exchange agreements in defense-related programs with the United States.²⁴ All of this is being driven by the increased competition in the arms market which compels producing weapons which, while increasingly more sophisticated, are also the cheapest available. Clearly, the French exclusivity of the market has weakened.

Third, at the operational level, the French requirement for a power-projection nuclear navy exhibits several weaknesses in force structure and capability. For example, the airborne early warning (AEW) capability of French carrier battle groups is particularly weak. The airwings do not possess anything comparable to the U.S. E-2C Hawkeye. Deck space for such an aircraft, in the French view, does not merit the trade-off in strike aircraft spots. Yet, without a true AEW capability, independent open-ocean operations are extremely hazardous in the standoff air-to-surface missile environment.

Additionally, carrier-based fixed-wing antisubmarine capability is not particularly strong, with the French carriers relying on the old, slow, single-engine Alizé aircraft. In any attempt to protect shipping in the Indian Ocean, a French carrier would be hard-pressed to counter Soviet, or any other submarines, even with the support of land-based antisubmarine aircraft. In recent years, the preponderance of naval funding has apparently gone to the ballistic missile submarine force, slowing the modernization pace of French carrier battle group and amphibious assault forces.²⁵ French naval airwings also do not possess a strong electronic warfare capability and cannot conduct radar suppression on the scale that U.S. airwings are accustomed to in the EA-6B aircraft. This weakness would be particularly hazardous when up against Soviet surface action groups.

Another problem for the French Navy is the absence of a dedicated coast guard. Patrolling coastal water (with the normally attendant fishing rights problems) falls squarely on the navy's back. This mission is a full-time job and draws heavily on the navy's budget.²⁶ For France, smuggling, international terrorism, and Soviet intelligence-gathering activities have made coastal patrol a jungle of offshore activity similar to that off the U.S. Gulf coast.

In summary, the French Navy finds itself shouldering a huge portion of France's overall defense posture—all the way from coastal patrol, through out-of-area power projection, to nuclear deterrence. As proved in the Persian Gulf, the French Navy has the capability to take on the responsibilities of a world-class fleet, but its vulnerabilities could be not only restrictive, but perhaps fatal.

French Naval Power and the U.S. Navy

In March 1989 Admiral C.A.H. Trost reported to the House Armed Services Defense Subcommittee that "reducing carrier levels below 15, without a concomitant reduction in our worldwide commitments, will inevitably lead to a repetition of the descending readiness spiral of the 1970s."²⁷ One year later (19 April 1990), Senator Sam Nunn of the Senate Armed Services Committee reported, "I believe the Navy can meet its requirements with between 10 and 12 carrier battle groups."²⁸

The question is, have U.S. Navy commitments been reduced, or do they remain the same in number? According to Admiral Trost's relief, Admiral Frank B. Kelso, "The objective of a maritime forward defense is to deter war, to show Nato's resolve to not relinquish one inch of soil. This means Nato forces should be placed in the best possible position to respond in case of conflict before conflict begins. . . . Then, and only then, can it be a credible strategy."²⁹ This statement does not suggest that the maritime strategy can tolerate a reduction in forward defense assets. If an offensive, forward-deployed strategy is still required, how will the United States meet those commitments with one-third fewer carrier battle groups than before?

Several courses of action are available. For example, one way to hold carriers forward deployed to meet current commitments would be to lengthen present deployment schedules beyond the nominal six-month time frame and with possibly shorter turn-around cycles between deployments. Experience with this concept, however, has demonstrated that personnel retention levels are reduced, and consequently, training and readiness levels are significantly more difficult to maintain. Therefore, recent proposals to use this method have met with resistance from the chief of naval operations.

A second possible course of action is random gapping of forward commitments in an attempt to find a middle road between alliance-supported commitments and reduced availability of naval forces, particularly carrier battle groups. This course was in fact taken in the fall of 1989 when, for a brief period, no U.S. carrier was in the Mediterranean. However, it is clear that within the current context of U.S. defense policy, the absence of a carrier battle group in that sea is the exception—not the rule.

A third suggested course of action is to increase foreign interoperability in the U.S. maritime strategy, i.e., fill the gaps in U.S. force availability with

allied assets while maintaining a forward-deployed posture with carrier battle groups. By 1998 the French Navy may be an excellent resource for creating a coalition battle group. French nuclear carriers could be supported by U.S. surface combatants, such as Aegis cruisers, to protect European and Indian Ocean commitments. With nose-tow launch systems (currently planned), cross-decking of aircraft from U.S. airwings to French flight decks will be possible. Thus, a French carrier with Rafale strike fighters could perform enhanced airborne early warning and surveillance by steaming with a detachment of U.S. S-3B aircraft or the advanced tactical support aircraft (ATS) now being developed. An ATS platform, combining the four major missions of ASW, AEW, EW, and logistics support would overcome the weaknesses previously noted in current French airwing structure.

Shortcomings in U.S. force structure have been embarrassingly evident in the mine warfare area and will be noticeable in another field when the older U.S. carriers begin to fade away in the late 1990s. Without a major service life extension program, eight U.S. carriers will reach the end of their fleet service sometime close to the year 2000.³⁰ This situation will be exacerbated if future carrier funding does not materialize. The French Navy will be bringing state-of-the-art systems on line during this same time frame, with both minesweepers and nuclear-powered carriers—ships which could be highly interoperable with a U.S. battle group.

Under a coalition battle group concept, a French carrier could join a U.S. battle group to maintain the current optempo of forward-deployed ships. Battle group command could be rotated between force commanders during workups and deployed cycles. While this might not be the ideal situation we enjoy as an all-U.S. battle group, as a deterrent force-in-being, capable of responding to a regional crisis, a coalition battle group would pose a credible force which could respond rapidly to almost any conventional threat.

What would happen if a crisis occurred in which the French national interest did not correspond to that of the United States? The United States would be responsible for a certain degree of crisis reaction risk. However, for anything less than global war, the United States could accept that risk for up to 10 days (the amount of time for a “ready” carrier from the 2nd Fleet to reach the eastern Mediterranean under the 6th Fleet). In the meantime, U.S. fleet forces could be kept deployed and capable of responding credibly to national interests.

Both the U.S. and French navies operate under similar strategic themes: global interests, forward (out-of-area) deployed forces, requirements for protection of shipping, power projection, and amphibious capability. Both run a high-tech philosophy, trading mass for accuracy in weaponry and relying on offensive strike power to achieve control of the seas. In the 1990s, the two nations’ naval operations and fleets are more alike, possibly, than at any

other time in the 200 years since France committed her army and navy to an operation in North America that changed the world.

Counter-Arguments to the Coalition Battle Group Concept

The principal “naysayers” argument to a coalition battle group centers on the traditional Nato perception of French political independence and military self-reliance. This argument is valid for nuclear deterrence. France will never accept subordination of her deterrent force to an Allied decision-making structure.³¹ However, at the conventional level, and hence for most points pertaining to conflict, the traditional perception may be a rear-window view of French strategic requirements. The inevitable internationalization of France’s naval arms industry will accelerate defense cooperation with her allies.³² In 1987-88 in the Persian Gulf, the French displayed not only a capability, but a willingness to achieve interoperability with U.S. fleet forces—to the extent that the French carrier *Clemenceau* and her escort ships easily and efficiently replaced and changed screening and stationing commitments within the U.S. fleet.³³ Communications and control (C²) worked well between both forces. The French Navy routinely carries out ship-to-ship communications in English, has compatible data link systems, uses the Nato signal book, and participates annually in a dozen joint exercises with U.S.-Nato forces.³⁴ Thus, the groundwork exists for a coalition battle group which could operate at the conventional war level. The separation of nuclear deterrent issues from conventional presence and intervention is the key to an operable coalition naval force.

A second argument against a coalition battle group might be that, despite the similarities between the U.S. and French strategic interests, there would be no guarantee of concurrence in policy between the two navies. Hence, unified direction of a coalition force could be difficult to reach. This argument may apply to conventional deterrence outside the scope of Nato influence, but should the Soviet sphere of influence diminish, and Nato’s political influence expand, for example in Southwest Asia, then a stronger argument would certainly exist for coalition U.S.-French naval presence and intervention when, and if, necessary. And, even if Nato’s influence remains as it has been, a bilateral U.S.-French naval agreement for coalition operations could still be engineered for areas of common concern, such as in the Mediterranean or in the Indian Ocean.

Of all the arguments against a coalition battle group, perhaps the most profound may originate in the American isolationist spirit, still not yet dead, which imbued U.S. naval leaders with a go-it-alone approach, not divorced from alliance support, but never relying on a foreign power to secure national objectives. Perhaps a coalition battle group signifies the forfeiture of this tradition. Ultimately, the cost of maintaining this tradition may dictate a

change no less profound than the change that occurred in France 200 years ago when the *ancien régime* fell and the modern world was born.

Conclusions

Coalition operations, particularly in partnership with the French Navy, present a viable option for the continued forward presence of the U.S. Navy. The U.S. and French navies have strategic and operational interests that can be shared. The force structure elements of both indicate not only compatibility, but gap-filling mission roles as well. French and U.S. naval budgetary constraints and increased industrial cooperation programs substantiate the practicality of coalition operations, which would beneficially impact on foreign arms sales and thus on third-world interests. In this increasingly multipolar world, the U.S. maritime strategy should incorporate the concept of coalition battle group operations to sustain national interests and objectives.

As Benjamin Franklin said, "Surely we must all hang together, or we shall hang separately."

* * * * *

French Naval Order of Battle

Personnel. 66,100 (including 12,000 Naval Air Force, 19,100 Conscripts and some 2,500 Marines), plus about 28,000 Reserves.

Structure. 5 commands (Atlantic, Indian Ocean, Pacific Ocean, Mediterranean; Strategic Submarines).

Fleet

Aircraft carriers. 2 *Clemenceau*-class CTOL carriers. 1 *Jeanne D'Arc*-class helicopter carrier and training ship.

NB: Two *Charles De Gaulle*-class nuclear-powered aircraft carriers are scheduled to replace the *Clemenceau* and *Foch* by the year 2000. The lead ship is already under construction, and is scheduled to be commissioned in 1995.

Cruisers. 1 Colbert-class guided missile cruiser

Destroyers

6 *Georges Leygues* class (C70) (7th and last ship under construction)

3 *Tourville* class (F67)

2 *Suffren* class

1 *Cassard* class (2nd under construction)

1 *Aconit* (C65) class

1 *La Galissonniere* (Type T-56)

1 *Duperre* (modified Type T-53)

1 *Dupetit Thouars* (modified Type T-47)

1 *Maille Breze* (Type 47)

Frigates

17 *D'Estienne d'Orves* class (A69)

6 *Commandant Riviere* class (being withdrawn)

NB: The first 3 units in a planned series of six light frigates (*Floreal* class) have been ordered.

Submarines

1 *L'Inflexible* class with 16-M4s

5 *Le Redoutable* class: 2 with 16 M-4s, 3 with 16 M-20s (being converted to carry the M-4 MIRVed SLBM with a range of 3,000 miles)

NB: *Le Triomphant*, leadship in a new class of SSBN's, under construction

4 nuclear-powered Rubis-class attack submarines (3 more under construction)

4 *Agosta* class

8 *Daphne* class

3 *Narval* class (reserve)

Amphibious Forces

2 *Ouragan*-class assault ships

1 *Foudre*-class assault ship

5 *Batral*-class assault ships

30 LCMs

11 LCTs

5 LSTs

Light Forces

10 *L'Audacieuse*-class patrol craft

4 *Glaive* class

8 *Leopard* PCCs

Mine Warfare Forces

10 *Eridan*-class minehunters (2 under construction)

5 *Circe*-class minehunters

5 *Sirius* class

4 *Ouistreham* class (ex-U.S. *Aggressive* class)

NB: 6 ocean minehunters (Bamo-type)

Miscellaneous and Auxiliaries. 4 *Durance*-class underway replenishment tankers (also command ships for the Indian Ocean), 4 support tankers, 4 *Rhin*-class depot/support ships, 9 supply tenders, 9 trials and research ships, 7 oceanographic and research ships.

Naval Aviation

3 strike squadrons with 60 Super Etendards

1 interceptor squadron with 12 F-8E Crusaders

2 ASW squadrons with 27 Alizés

5 maritime reconnaissance squadrons with 30 Breguet Atlantics and 5 Guardians

1 reconnaissance squadron with 10 Etendard IVPs

3 ASW helicopter squadrons with 40 Lynx

2 assault helicopter squadrons with 13 Super Frelons

2 SAR/liaison squadrons with 24 Alouette II/III

Major Construction Programs Currently Underway

-2 *Charles De Gaulle*-class carriers

-A new class of 4 SSBNs (*Le Triomphant*)

- 1 additional C70 destroyer
- 1 *Cassard*-class DDG
- 3 FL light frigates (*Lafayette* class, 6 planned)
- 3 patrol frigates (*Floreal* class, 10 planned)
- 2 TCD 90 LSDs
- 6 Bamo class mine warfare ships
- 27 Atlantique IIs ASW aircraft (being delivered) (total of 42 planned)
- The shipboard Crusaders and Super Etendards are to be replaced by the new Rafale ACM by the late 1990s (total of 86 aircraft planned)

Major Naval Bases: Brest, Cherbourg, Lorient, Toulon

Source: George G. Weickhardt, "U.S. Maritime Strategy and Continental Options," *Military Technology*, January 1990, pp. 82-85.

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21. "The French Naval Equipment Exhibition 1988," *International Defense Review*, December, 1988, p. 1646.
22. Friedman, p. 43.
23. Brigadier General M. Thevenian, Defense Attaché, French Embassy, Washington, D.C., "France's Role in U.S.-Allied Defense Industry Cooperation," *NATO's Sixteen Nations*, October 1989, p. 24.
24. *Ibid.*
25. Pertuiset interview.
26. Bally, p. 77.
27. Scott C. Truver, "Can We Afford the 15-Carrier Battle Group Navy?" *Armed Forces Journal International*, July 1986, p. 78.
28. *The Washington Post*, "A New Europe—A New Military Strategy," Text of Sen. S. Nunn (D-Georgia) comments to Senate Armed Services Committee, 19 April 1990.

29. Admiral Frank B. Kelso, USN, "SACLANT's Perspective on Forward Defense," *NATO's Sixteen Nations*, September 1989.
30. Truver, p. 81.
31. Jean-Pierre Chevenement, Minister of Defense of France, "The Security Policy of France," *NATO's Sixteen Nations*, October 1989.
32. Thevenian, p. 24.
33. Interview with Commander Conway Zeigler, USN, Naval War College Instructor, Newport, R.I.: May 1990.
34. Bally, p. 72.



The character and the skill of the player against you are important factors.

Naval Strategy

A. T. Mahan (1911)

Little, Brown (1918), p. 177

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Napoleon is reported to have said at Austerlitz, when urged to seize an evident opportunity, "Gentlemen, when the enemy is committed to a mistake, we must not interrupt him too soon."

Naval Strategy

A. T. Mahan (1911)

Little, Brown (1918), p. 289

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Napoleon once said that the art of war consists in getting the most of the chances in your own favor. The superior fleet holds the strongest suit, but the strongest suit does not always win.

Naval Strategy

A. T. Mahan (1911)

Little, Brown (1918), p. 177