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ations Profile

Article | Gong Kuang-yu

規劃整建巡防艦、艇 優先順序之探討

Examining the Priority for the Shipbuilding Plan about Patrols, Frigates, and Vessels



Operations Prof

前言

上執法機關究竟優先建造巡防艦抑或 巡防艇?兩者之間如何取得一個最佳 平衡點?歷年來衆說紛紜,莫衷一是,迄無 定論。為免學理上之討論流於「空談」,乃 就海上執法機關,自水上警察巡邏隊(以下 簡稱水警隊)、保安警察第七總隊(以下簡 稱保七總隊)、水上警察局(以下簡稱水警 局)、迄今行政院海岸巡防署(以下簡稱海 巡署)艦艇船型之演變,作一回顧與檢驗, 俾利探究孰先孰後之問題。

機關與艦艇變革

(水警局以前稱為「巡邏艇」) 海巡署成立以後始改稱「巡防艇」

一、台灣省淡水水上警察巡邏隊裁撤時 (79.01.01):

配置35噸巡邏艇3艘。

- 二、保安警察第七總隊裁撤時(87.07.16): 配置30噸、35噸、50噸、55噸、60 噸、100噸巡邏艇及巡護船,計83艘。
- 三、水上警察局裁撤時(89.02.01): 配置30噸、35噸、50噸、55噸、60 噸、100噸巡邏艇及巡護船,計86艘。
- 四、 行政院海岸巡防署(94.03.10): 配置20噸、30噸、35噸、50噸、55 噸、60噸、100噸巡防艇及、500噸、 600噸、700噸、900噸、1800噸巡防 艦、巡護船、搜救艇、除污艇,計 166艘。

自水警隊、保七總隊至水警局,機關改制多次,固然係時代潮流所趨,但歷來執行 拯災救溺、打擊不法、維護海疆,表現卓 著,績效輝煌,深獲政府及全民肯定,亦是 重要因素。細加觀察,該時期執法工具均是 100噸以下輕快巡邏艇,在在顯示小型艇績 效頻傳,不斷海上建功,對於促使機關成 長、茁壯、改制,厥功甚偉。

89年1月28日海巡署成立,納編財政部 關稅總局8艘緝私艦,始正式有大型巡防艦 之參與。

Foreword

W hat would the priority be for the maritime law enforcement agency to build, in terms of the patrol frigates or the patrol boats, and how to achieve the best equilibrium point? As the argument continues for years, no answers seem to reach a conclusion. Yet to avoid of jeopardizing the theoretical discussions as an empty debate, the evolvement of the patrol frigate and vessel models manned by the maritime law enforcement agency, ranging from the jurisdiction of the Water Police Patrol Squad (WPPS), to the 7th Surveillance Police Head Squad (SPHS), to the Bureau of Water Police (BWP), to the present day's Executive Yuan Coast Guard Administration (CGA) ,comes under review. It is useful for studying the issue as to which should be launched first.

The evolvement of the agencies and the vessels

(which were collectively referred to as the "Patrol Vessels" prior to the jurisdiction of the BWP, and have only been referred to as the "Defense Patrol Vessels" since the set up of the CGA)

- 1. At the time when the Taiwan provincial WPPS, Tamshui, was dismantled (Jan. 1, 1990):
 - A total of three 35-T frigates had been allocated.
- 2. At the time when the 7th SPHS was dismantled (July 16, 1998): A total of 83 ships covering the 30-T, 35-T, 50-T, 55-T, and 60-T and 100T patrol vessels and escort vessels had been allocated.
- 3. At the time when the BWP was dismantled (February 1, 2000): A total of 86 vessels, encompassing the 30-T, 35-T, 50-T, 55-T, 60-T and 100-T patrol vessels and escort vessels had been allocated.
- 4. At the time of CGA, Executive Yuan. (March 10, 2005): A total of 166 vessels, encompassing the 20-T, 30-T, 35-T, 50-T, 55-T, 60-t, 100-T patrol ships, and the 500-T, 600-T, 700-T, 900-T and 1800-T frigates, escort vessels, rescue vessels, and sludge removal vessels have been allocated.

From the jurisdiction of theWPS, the 7thSPHS, to the BWP, the institution were reorganized several times. It is by reason of the changing times, and the remarkable performances of the agencies in many fields, such as playing a vital role in disaster and drowning rescue, enforcing the nation's sea territories etc., which were acknowledged by the government and the people alike. A further examination reveals that the enforcement tools of lightweight patrol vessels under 100 tons had largely been used at that time. It was very much in evidence at performances by the smaller vessels. They have greatly contributed to the agency's growth, expansion and reorganization.

It is not until the formal inception of the CGA on January 28, 2000, have eight anti-trafficking vessels which belonged to the Head Bureau of Tariff and Excise, Ministry of Finance, been revamped under the agency have large-scale frigates officially becoming part of the agency's fleet formation. 分

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艦艇分類

何謂艦?何謂艇?依據海巡署函送人 事行政局「各級艦艇人力配置參考基準」 之標準:

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一、巡防艦:

- 區分為大型、中型、小型巡防艦。 (一)大型巡防艦:
 - 總噸位一千噸以上未滿一萬噸。
- (二)中型巡防艦:總噸位五百噸以上未滿一千噸。(三)小型巡防艦:
 - 總噸位二百噸以上未滿五百噸。
- 二、巡防艇:
 - 區分為大型、中型、小型巡防艇。
 - (一) 大型巡防艇:
 - 總噸位五十噸以上未滿二百噸。
 - (二)中型巡防艇:
 - 總噸位二十噸以上未滿五十噸。

(三)小型巡防艇:總噸位未滿二十噸。 小結:本文所定義之「巡防艦」,係指總噸 位二百噸以上之船舶:「巡防艇」,係指總 噸位二十噸以上,未滿二百噸之船舶。

輕快巡防艇特色

為何輕快巡防艇於保七總隊、水警局期 間表現優異,成果輝煌?

一、執勤範圍以沿、近海為主,適於輕快巡
 防艇活動:

長久以來國人所認知的台灣,東面是蔚 藍寬廣的太平洋,北面則是放眼千里之 中國東海,但在日本控制宜蘭以東之與 那國島及基隆東北外海釣魚台島之現實 下,我國所能主張或掌控的海域空間有 限。再加上我們的西邊是不到100浬的 台灣海峽,南邊則是鵝鑾鼻至菲屬巴丹 群島雅米島間寬達80浬且具有中、菲經 濟海域主張重疊的巴士海峽,使得我國 海域空間的發展深受侷限。

我國目前有效管轄之地理區域主要是台澎、金、馬、東沙、與南沙太平洋島及

The classification of frigates and vessels

What constitutes as frigate and what as vessel? The criteria governing the "Reference criteria for manpower allocation of various grades of frigates and vessels" as promulgated by a CGA memorandum to the Bureau of Personnel Administration (BPA) could better illustrate the terminology,

- 1. Patrol frigates: Which are distinguished into the large-scale, mid-scale and small-scale patrol frigates.
 - (1) Large-scale patrol frigates: frigates with a total tonnage rated over 1,000 tons and less than 10,000 tons.
 - (2) Mid-scale patrol frigates: frigates with a total tonnage rated over 500 tons and less than 1,000 tons.
 - (3) Small-scale patrol frigates: frigates with a total tonnage rated over 200 tons and less than 500 tons.
- 2. Patrol vessels: which are distinguished into the large-scale, mid-scale and small-scale patrol vessels.
 - (1) Large-scale patrol vessels: vessels with a total tonnage rated over 50 tons and less than 200 tons.
 - (2) Mid-scale patrol vessels: vessels with a total tonnage rated over 20 tons and less than 50 tons.
 - (3)Small-scale patrol vessels: vessels with a total tonnage rated less than 20 tons.

The term "patrol frigate" referred herein pertains to vessels with a total tonnage rated over 200 tons, and that for patrol vessel pertains to vessels with a total tonnage rated over 20 tons and less than 200 tons.

The characteristics of the lightweight patrol vessel

What contributes the lightweight patrol vessels to perform outstandingly with exceptional yields during the administration of the 7th SPHS and theBWP?

1. The lightweight patrol vessels are ideal for patrolling the area of coastal and near coastal waters

All the time, what the local population knows of Taiwan is of thegreat blue Pacific Ocean to the east, and the far-reaching Eastern China Sea to the north. Yet under the realistic circumstances that Japan continues to control the areas of the Naha Island, east of Ilan, and the Senkaku Island, offshore of Keelong, the sea territories that Taiwan could truly claim are rather limited. This, coupled with less than 100 nautical miles of Taiwan Strait to our west, and the 80 nautical miles of overlapping economic sea territories between Taiwan and Philippines from Erluanbi, Pingdong to the Philippines Batan Archipelagoes' Yannis Island does render Taiwan's sea territorial development to be rather confined.

The geographical areas that are effective controlled by Taiwan government mainly include the mainland Taiwan, Penghu, Kinmen, Matsu, Dongsha and Nansha Pacific islands, and off-

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台灣本島之附屬島嶼。由前述我國所處 之地理環境可以發現,台、澎、金、馬 四周均無寬達400浬之海域空間。換言 之,民國87年1月21日公布之「中華民 國領海及鄰接區法」、「中華民國專屬經 濟海域及大陸礁層法」,我執勤範圍法 理上固可遠及專屬經濟及大陸礁層法規 定之海域,甚至及於公海,惟實務上仍 以沿、近海24浬內為重心,因而輕快巡 防艇得一展所長。

二、過去任務單純,與目前不可同日而語 海域巡防業務發展有一明顯趨勢,海域 事務愈趨繁雜,責任日益沉重。

保七總隊執法範圍、內容為:沿海商、 漁港及河口附近六浬,配合安檢執行查 緝偷運械彈、爆裂物、毒品;防止偷渡 及協助查緝走私。

水警局執法範圍、內容:除了配合農委 會漁業巡護船隊執行遠洋漁業警察任務 外,以內水、領海、鄰接區、禁止、限制 水域為主;執勤內容除了海上犯罪偵防及 警衛、警戒等事項為主辦外,餘海上交通 秩序之管制及維護、海上救難、海洋災害 救護、海上糾紛之處理、漁業巡護、漁業 資源之維護、海洋環境保護及保育等事項 多係協辦。執勤範圍小,內容單純,輕快 巡防艇得以發揮其功能。

海巡署則執勤範圍大幅擴增,執勤內容 顯著增多,尤以中共修正海洋政策,由 近海推向遠洋,情報船與海洋調查船頻 頻出沒我周遭海域,海上海難、海污、 海洋資源、交通秩序維護…等工作,亦 由過去配角協助角色,轉變為主導,大 型艦需求較前顯著。 業

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shore islands annexed to the Taiwan main island. The geography where Taiwan is situated shows the vicinity around Taiwan, Penghu, Kinmen and Matsu lack a sea territorial margin of 400 nautical miles. In other words, of the "Republic of China's Territorial Sea and Adjacent Area Law", the "Republic of China Exclusive Economic Sea Territories and Continental Reef Administration Law" promulgated on January 21, 1998, by theory Taiwan's sea territories could reach as far as all sea territories specified by the exclusive economic zone and the continent reef legal provisions, or even extending out to the high sea. Yet practical implementation continues to revolve around a 24 nautical mile radius at the near-coastal and costal areas, which makes lightweight patrol vessels ideal to do what they do the best.

2.The past missions have been rather simplistic compared to the present tasks

An ominous trend in coast guard operations is marked by an increasingly complex maritime affairs and increasingly heavier responsibilities.

The authority of the 7th SPHS by law entails supporting the security inspection, crackdown against illicit trafficking of artillery, explosives, and narcotics; curtailing human trafficking and facilitating trafficking clampdown within a six nautical mile range of coastal commercial and fishing ports and in and around estuaries.

The authority of the BWP entails more than supporting the Council of Agriculture's fishery escort fleet to carry out deep sea fishery policing work, and is mainly responsible for safeguarding the nation's sovereignty waters, territorial waters, adjacent areas, restricted and banned waters. Whose duties encompass more than maritime crime investigation, policing and safeguarding but also in maritime transport order control and maintenance, maritime rescue, marine disaster rescue, maritime dispute mediation, fishery escorting, marine resources maintenance, oceanic environment protection and conservation etc. The scope of duty enforcement is deemed straightforward and simplistic enough to warrant the lightweight patrol vessels to truly excel in their intended purposes and functions.

The authority of the CGA has greatly been expanded, in that the content of duty execution has been greatly increased. Because of the impact of the communist China mended ocean policy, such as its maritime policy that pushes its rule from near coast to the deep sea, coupled with a frequent intrusion of intelligence ships and ocean surveying boats tapping in and around Taiwan's territorial waters. Besides, the role of the CGA has been changed tremendously from supporting status to active status owing to some other missions including maritime rescue, ocean pollutions, marine resources, traffic order maintenance and so forth. There is a need for larger scale frigates more so than ever before.

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三、台灣周遭海域犯罪輸具以100噸以下小型船、艇、筏為主,輕快巡防艇適可制壓。 海上犯罪首賴「運輸工具」(以下簡稱輸 具),當前台海「CTR、CTS、CT 2、CT3、CT4」漁船已成為犯罪 輸具之主流。CTR為動力漁筏、CT S為動力舢舨、CT2為十噸以上未滿 二十噸、CT3為二十噸以上未滿五十 噸、CT4為五十噸以上未滿一百噸。 上揭犯罪主流船種之舷高、吃水、速 度、大小…。輕快巡防艇適與相當,跳 船、登檢、查緝,均稱便利。

四、其他優點:

- (一)輕快巡防艇重量輕、體積小、吃水
 淺,台灣周遭所有商漁港均可安全
 進出,受限較小,可佔地利之便。
- (二)輕快巡防艇能攻助守,高速就位, 慢速站位,其機動性、部署能力、 打擊力,均非一般易被偵蒐裝備發 現之中、大型船艇所能比擬。



- 3 .The lightweight patrol vessels are sufficient to exert counterattacks as criminal carriers in and around Taiwan's sea territories remain largely small-scale boats, vessels and rafts rated under 100 tons. Maritime criminals rely mostly on transportation vehicles (TV), and noticeably the CTR, CTS, CT2, CT3 and CT4 Some fishing vessels roving in Taiwan's sea territories make up the mainstream of the criminal's transport vehicles, in which CTR being the powered fishing rafts; CTS being the powered sampans; CT2 being boats rated over 10 tons but under 20 tons; CT3 being boats rated over 50 tons and under 50 tons; CT4 being boats rated over 50 tons and under 100 tons. The bow height, draught, boat speed and size of the foresaid mainstream criminal vessels types are similar to those of the lightweight patrol vessels. It is very convenient for the lightweight patrol vessels to do jobs in terms of ship crossing, boarding, and cracking down crimes.
- 4. Other advantages:
 - (1) The lightweight patrol vessels are compact, lightweight and with a light draught. They can take advantage of safely going in and out of all commercial and fishing ports of Taiwan.
 - (2) Not only the lightweight patrol vessels are versatile in defensive and offensive tactics but they can be deployed rather quickly and secure placement at a low speed, whose mobility, deployment capabilities and infiltration are unparalleled by mid and large sized vessels that could easily be spotted by surveillance equipment.
 - (3)Thanks to the slow deployment, yet with sensitive communications equipment, coupled with effective radio transmission maneuver, the lightweight patrol vessels are less prone to be discovered by illegal group boats and rafts.
 - (4)The lightweight patrol vessels benefit from the swift building process, the low cost, economical maintenance, and a compact staff need.
 - (5)The lightweight patrol vessels can be operated with high or low speed. They are equipped with sensitive communications facilities, and can carry out team duties as well as independent operations.

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(三)輕快巡防艇因能長時慢速站位,且 通訊靈敏,配合有效的無線電發射管制 作為,則甚難被不法集團船筏發現。

- (四)輕快巡防艇建造快速、價格低廉、 維修經濟,人員精簡。
- (五)輕快巡防艇高、低速運動,具備 有效靈敏通訊設施,能實施群體 執勤也能放單獨立執勤。

分析檢討

一、過去:

自保七總隊迄水警局前後十年時間,由於 海域執法機關本身不具備空中能量優勢, 因此擁有數量大,成本低、妥善率高、機 動性強、執勤人員少、能集體又能獨立執 勤、能在國內快速建造又能採總成換裝方 式維修,輕快巡防艇符合當時時空環境需 要,因此迭創佳績。是海上犯罪者真正顧 忌擔憂的力量,亦是我海域執法機關執勤 載台整建的主要導向。

二、未來:

造艦、艇之取捨,依國家目標而定,例 如中共早期建軍理念為近海防禦「飛、 潛、快」,其中「快」指的就是魚雷快 艇,如今修正政策為「遠海作戰」,改以 航空母艦為造船之目標。易言之,是否 規劃建造大型艦,端視「國家目標」、 「任務走向」、「執勤範圍」而定,其分 類參考美國海軍戰爭學院研習教材 「Approaches to Force Planning」介紹 規劃方法如下:

(一) 宏觀導向

宏觀導向的造艦、艇規劃法,係由 國家先行界定所欲達到之國家目 標,例如究竟以環境污染保護、海 洋資源維護、海上拯災救難、抑或 查緝不法、打擊犯罪、伸張主權、 展示國威為核心價值,先行律定 後,海巡機關依此目標研擬能支持 此目標之造艦、艇策略。

Analysis and overview:

1.The past

In roughly over a decade's time form the 7th SPHS to theBWP; the maritime enforcement agencies do not have the advantages of surveillance in air. The lightweight patrol vessels had been faithful in the performance of their duties because they met the requirements of the time being, for example, a large fleet, the low-cost, high adequacy, high mobility ships, a small number of duty personnel carrying out duties in groups or independently, built or replaced as a whole locally. They remain the force that the sea criminals are afraid of, and serve as a major orientation in revamping Taiwan's maritime law enforce agencies' carriers.

2.The future

Thechoices of building patrol frigates or patrol vessels are entirely determined by the national objectives. For instance, the Chinese regime's near coast defense strategy of flying, diving and quick had been built on the early military mobilization concept. Among them, quick refers to torpedo fast boats. While the strategy of Chinese government has been changed to far-sea operation, the objective of shipbuilding is to build escort vessels. In other words, it tied in with the national objectives, mission orientation, and scope of operations whether to build large-scale frigates or not. The categorization of the planning methods copied out of the material of U.S. Navy War College" Approaches to force planning" is as follows, (1) The bread parametric griptation

(1)The broad-perspective orientation

A broad perspective of shipbuilding planning method oriented frigates or vessels pertains to the feasibility national objectives designed by the government first. For instance, it needs to first define how best to enforce environmental pollution crackdown, maintain marine resources, rescue maritime distress, or how best to crackdown the outlaws, infiltrate the criminals, and enforce its sovereignty and demonstrate the national strength as the core value, whereby the CGA is currently referring to these objectives for drafting a frigate/vessel building strategy that supports such objectives.

(2) The present-status orientation

The method primarily pertains to focusing on how the current Coast Guard frigates, vessels and manpower would suffice to meet its current mission requirements. It has a major advantage of being practical. Being that the development process it does not take into account of future evolvement.during the development process

(3) The conceivable orientation

This pertains to determining the possible scenarios as the basis of patrol frigate/vessel building, in which the scenario requirements are often determined by time and location elements, and thecapabilities of the CGA as well. For instance, by defining that the sufficient manpower has to appear the place and manage to control the situation within a 30 minutes time when the report of criminal or maritime disaster case received within the range of

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(二) 現況導向

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此方法主要著眼於如何以現有海巡 艦艇、人力,應付當前之任務需 求,其最大優點是「務實」,規劃過 程中不考量未來演變。

(三) 想定導向

係以情勢需求之想定,作為巡防 艦、艇規劃建造的依據,情勢需求 通常係以時空因素、能力大小來設 定,例如設定近海24 浬內接獲犯 罪、海難報案,必須30分鐘內要有 足夠人力馳赴現場,有效處理,海 巡機關依此目標即可規劃需求船 型,艦、艇數。

(四) 威脅導向

此方法主要是評估犯罪者之能量, 如犯罪輸具數量多寡,密度高低, 性能良窳、航速快慢、噸位大小, 以研判威脅程度,並以執法者與犯 罪者力量之平衡為考量起點。

(五) 任務導向

此方法係以任務需求為設計依據, 以達成任務為目標,規劃人員所設 計之重點,以能達成或滿足任務需 求,為考量重點,易言之,海巡機 關若以海域執法為核心,則規劃建 造「巡防艦、艇」為原則;以救難、 除污、維護漁業資源為核心,則規 劃建造「功能艦、艇」,救難艦、除 污艦、巡護船為重點。

(六) 科技導向

此方法係藉科技優勢,發展高科技 裝備,以替代或彌補規劃建造艦、 艇之方法,例如以航空器、雷情偵 蒐系統來代替海上艦、艇之搜索、 巡邏。

(七) 財力導向

此種規劃係以預算為主導,即在規 劃之前就律定佔海巡總預算的百分 之幾,在此額度內有效規劃建造需 求艦、艇。 24 nautical mile from the shore. , According to these scenarios, the number of frigates, vessels and boats required can be planned by the CGA

(4)The threat orientation

This method primarily pertains to assessing the criminal'scapability, such as what the number density, function, speed and tonnage of criminal's vehicles are. By which, f the threats of criminals can be recognized. The break-even point in terms of power between the authorities and the criminals has to be taken into account first.

(5)The mission orientation

This method is designed on the basis of missionrequired. To fulfill the mission is its goal. , To complement or satisfy the mission requirements is it's key point concerned In other words, when focusing on maritime law enforcement as the core objective, the Coast Guard agency would develop a principle of building patrol frigates and vessels, whereas when focusing on maritime rescue, pollution removal and fishery resource maintenance, the agency would focus on building functional frigates and vessels, rescue vessels, pollution removal vessels and escort ships.

(6)The technology-led orientation

By means of tech advantage, this method pertains to develop hightech equipments to to substitute or compensate frigate and vessel building, i.e. substituting frigate/vessel sea search and patrol with aircraft or radar intelligence gathering systems.

(7)The finance-led orientation

This is a budget-led plan. The percentage of total budget of CGA, going to be paid for shipbuilding, is decided before the plan made. The frigates and vessels. required could be planned and built effectively within the budget allocated.



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結論

海上執勤功能良窳,執勤工具能否便 利遂行任務,是重要因素之一。現階段假 設海域執法之任務、目標、情勢依舊,水 面執勤載台籌建方向,依過去實務驗證, 應仍就是「大量的輕快巡防艇」,更具體的 說是:「能安全進出台灣周邊各中型以上 漁港,能高、低速運動,具備有效指管通 訊設施,並能總成換裝維修的國造輕快巡 防艇。」

大型艦,具有長期的海上機動力、耐 波力、續航力以及偵蒐能力,可以有效支 援小型艇,所以如果國家財政許可,任務 需要,應予籌建。但對於大型艦的整建, 吾等不宜陷入好高鶖遠的迷思,如「美、 日有,我國也應有!」人云亦云,耗費巨 額預算建造大型全功能巡防艦,均是寶貴 的「理想」,也是身為海巡一分子所應懷有 的「夢想」。但是要先行釐清大型艦任務作 什麼?定位在那裡?數量要多少?噸位要 多大?目前國家預算及人力資源逐年遞 减,規劃整建大型艦抑或小型艇之政策取 捨,應先確定「國家目標」、「任務走 向」、「執勤範圍」而後定;易言之,一個 合宜的巡防艦、艇規劃設計途徑必須在政 策、策略、風險、威脅、財政、與計畫間 取得平衡,就我國當前情勢言:「在國家 財政支出允許情況下(財力導向),針對情 勢威脅(威脅導向),考量任務優先順序 (任務導向),並配合國內科技與工業能力 (科技導向),來規劃整建海巡機關未來所 需(想定導向)巡防艦、艇」,始為一個合 宜設計途徑。(本文作者任職於北部地區 巡防局副局長)。

Conclusion

To gauge the quality of operations of the maritime duty enforcement and the availability of the vehicles performing the duties would emerge as one of the crucial factors. Assuming that the current missions, objectives and scenarios of maritime law enforcement remain unchanged, a general direction of shipbuilding about the water-surface duty carriers would call for a large volume of lightweight patrol vessels, specifically "A variety of high-performance, low-speed motioned vessels fitted with effective command and communication facilities that The model of light quick vessels made domestically can go in and out of the mid-sized fishing portson the periphery of Taiwan, with the capability of high and low speed motion, the facilities of effective command and communication, and the feature of being easily maintained d and converted.

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Meanwhile, large-scale frigates with a longer range of sea mobility, wave resistance, navigability, and intelligence gathering can effectively support smaller scale vessels, which ought to be built given national finance permits and coordinated to mission requirements. We should be prudent for not falling into the myth in terms of building a largescale frigate fleet. We need not to join the argument about Taiwan should have whatever Japan and the U.S. already . It is a perfect ideal and daydream for the staff of CGA to spend a large sum of budget for building large-scale patrol frigates with diverse function. Yet it is better to understand first what the large-scale frigates can do, and where should its position lies, how many and at what tonnage? With the government's finance and manpower resource dwindling over the years, the choice for building and overhauling either large-scale frigates or small scale vessels should be tied to discern the state objectives, mission orientation, scope of duty performance. In other words, devising a suitable patrol frigate/vessel fleet does rest on arriving at an equilibrium point among the policy, strategy, risks, threats, finances and planning. Judging from Taiwan's current scenarios, taking into account national finance that permits (the finance orientation), and coordinated with the local technology and industrial know-how (the technology orientation), would emerge as a viable means for devising and overhauling the agency's future needs (the perceivable orientation) in patrol frigates and vessels.

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