

美國海岸防衛隊 深水計畫新趨勢

Current New Trend of U.S. Coast Guard's Deepwater Project

◎文/許啟業

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冷戰結束後，美國終於擺脫蘇聯而獨領全球強權，並開始以其國家利益或道德標準為判斷，運用強大武力及經濟等力量，扮演世界警察的角色，但世局並非那般單純，國際社會猶如你我身處的社群一般，光靠拳頭大、銀子多或許可以說話大聲些，但不代表可以順利解決所有問題，其他意見不同領袖偶爾聯合抵制，加上幾個頑劣分子不時挑釁搗亂，確實足以使她頭痛不已。2001年911事件爆發後，美國始驚覺即使擁有強大的武力投射能力，將部隊派到其他國家打擊敵人，卻無法杜絕恐怖分子或有心人士對本土的威脅，因此布希總統在2002年11月25日迅速成立國土安全部，2003年2月25日海岸防衛隊也從交通部改隸在這個組織架構下，成為捍衛美國海上保安的自由之盾。

為了強化執行能量，加速汰換舊式裝備，海岸防衛隊自2002年6月25日開始推動其成軍以來規模最大的25年裝備籌建計畫—整合深水系統^{註1} (Integrated Deepwater System, IDS)，總預算從剛開始的170億美金增加到目前的240億美金，初期由美國軍火工業的兩大巨頭—洛克希德·馬丁公司 (Lockheed Martin Corp) 和諾斯羅普·格魯曼公司 (Northrop Grumman Corp) 所組成的公司得標，工作範圍包含新建艦艇、航空器及指管通情設施，但相關工作進行得不如預期順利，例如8艘馬塔戈塔島 (MATAGORDA) 巡防艦的加長及延長壽期計畫，

After Cold War, the U.S. has finally got rid of the U.S.S.R. and dominated the world. This new world power tries to act as a world police with its strong forces and economic strength in its own profits and moral standards. However, the global situation is not that simple. The international community is just like a common community we live in; those who solve problems with forced power and money might really get them some threatening effects, but that doesn't mean they can solve all problems. The U.S. has encountered numerous setbacks from some country leaders and the constant unrest from those malicious die-hards. After the September 11 attack in 2001, the U.S. has suddenly realized that although it has strong forces which can be projected to foreign lands to annihilate possible enemies, it still can't radically prevent the threats posed on the homeland from terrorists or purposeful minds. As a result, President Bush has ordered to establish the Department of Homeland Security (DHS) on November 25, 2002. On February 25, 2003, the U.S. Coast Guard was removed from the authority under the Department of Transportation to the DHS and become one of the freedom shields to maritime security.

In order to reinforce the operation capability and hasten the speed of equipment renovation, the U.S. Coast Guard has executed on June 25, 2002 the largest scale of equipment installation

被發現有船體變形及通信系統整合等嚴重問題，另外疏於監控本計畫進度議題亦遭外界批評^{註2}，為了力挽狂瀾，海岸防衛隊已採取相關措施，以重新恢復民眾及國會對本計畫的信心。

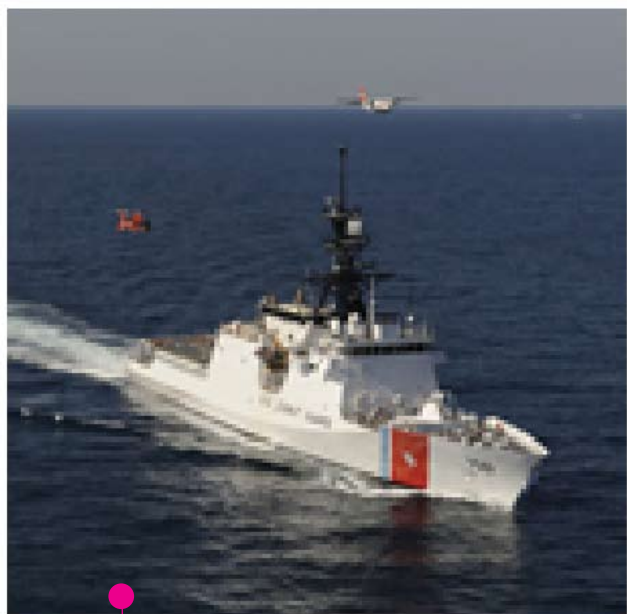
一、加強採購監理，落實管考執行

自從2006年8月一名曾經在洛克希德·馬丁公司服務，且參與深水計畫電子通信設備的工程師麥克爾·德柯特（Michael DeKort）在視頻搜尋引擎YouTube中透露「島」級巡防艦改建問題後，海岸防衛隊便常遭到媒體及國會抨擊其對深水計畫的監理制度，並認為這是導致計畫挫敗的主因之一。因此，在2007年7月31日參議院以壓倒性的426票對0票通過「整合性深水計畫改造法案（Integrated Deepwater Reform Act）」^{註3}，要求海岸防衛隊在4年內調整深水計畫內容，禁止由民間系統整合業者主導整個採購案，而應採開放競爭方式、引進第三者獨立審計機制，並設置直屬指揮官且由文職人員主導的採購專責部門，以設定各項工作期程與所應達成之目標。

project in the most recent 25 years, the Integrated Deepwater System (IDS).¹ The total budget of the program was estimated at US\$17 billion but increased to US\$24 billion at a later time. The first phase of the program was bid by the private consortium of two major weaponry manufactories-the Lockheed Martin Corp. and Northrop Grumman Corp. The range of the phase included the building of vessels, aircrafts and C4ISR equipment. However, the progress wasn't very encouraging. For example, the modification of hulk extension and service expectancy lengthening on eight Matagorda cutters has been detected failure in hulk distortion and communication integration problems. Their lack of monitoring on the phase was also criticized by the public.² To save the project, the U.S. Coast Guard has tried for relevant measures to regain the confidence from the general public and the Congress.

I. Improve acquisition monitoring and consolidate auditing functions

In August 2006, one of the former engineers of Lockheed Martin Corp., Michael DeKort, who took part in the IDS tele-communication system, divulged the modified problems of Matagorda cutters on video sharing website YouTube. After the divulgence, the U.S. Coast Guard has been often criticized by the press and the Congress on their monitoring system of the IDS program. This is one of the reasons that discourage the program. Therefore, on July 31, 2007, the Senate passed the Integrated Deepwater Reform Act with a 426 to 0 voting³ to ask the U.S. Coast Guard to revise the program content in four years. The act forbids a private integration company to dominate the acquisition program and suggests that it should introduce a third-party independent audit mechanism in an open competition. In addition, it also demands that a direct governing commander should be ap-



首艘國家安全級巡防艦「倍索夫」號。

圖片來源：

<http://www.uscg.mil/acquisition/nsc/default.asp>

The first National Security cutter, Bertholf.

Photo source:

<http://www.uscg.mil/acquisition/nsc/default.asp>

為了早日擺脫深水泥淖，海岸防衛隊提早在2007年7月13日啟動「採購改革藍圖（Blueprint of Acquisition Reform）」行動，整併原深水計畫辦公室及相關採購單位，立即在其總部成立一級幕僚層級的採購專責部門，監理20幾個計畫、總值達270億美元的採購案^{註4}，其中包括救援21（Rescue 21）、全國自動辨識系統（Nationwide Automated Identification System）及中程艦艇籌建等計畫，這項改革措施被海岸防衛隊視為行政改革的重大里程碑，並認為將有效管理大型建案進度。這些意見也反映在美國政府的2009年政府預算中，當布希總統將聯邦危機管理局（Federal Emergency Management Agency）預算從2008年的32億美元大幅刪減到19億美元時，卻將2009年的邊境防護及移民管制預算較2008年增加19%，其中海岸防衛隊預算匡列為78億美元，而深水計畫也較2008年增列2億美元，達到9億9000萬美元，另也編列2,550萬美元推動全國自動辨識系統，以更有效地監控四周海域的海上活動^{註5}。

二、持續籌建能量，維持勤務效能

海岸防衛隊為了解決當前問題的替代方案，也曾委託外部的政策分析團隊在本計畫有限預算及期程嚴重落後等問題的狀況下找出解決措施，惟所提出的一項當前重大採購改善方案及兩項降低高層計畫風險提案，經雙方深入研析後均認為尚難完全解除困境，海岸防衛隊只好自行重新提出改進策略^{註6}。

首先對深水計畫中的艦艇汰建部分，原係考量許多艦艇多已老舊（平均艦齡長達35年^{註7}），始規劃將49艘110呎長的「島」級巡邏艦加長到123呎，並加裝先進通訊等套件，以延長這批船艦役期，但2008年經改造的8艘船體被發現變型及系統問題後，卻使該改建案引來各界撻伐。

為了突破這個困境，2007年起美國海岸防衛隊在深水計畫外，加速推動新建58艘快速反應艦（Fast Response Cutter）籌建計畫，規劃在2008年春天完成簽約，並讓首艘艦在2010年投入服役，以儘速與其他未經改建的110呎巡邏艦共同參與巡防工作，而在此期間為避免勤務空隙，該隊除已要求

pointed and the acquisition department should be dominated by civil official in order to set up progress and purposes in the phase.

In order to get out of this troubled water as soon as possible, the U.S. Coast Guard has enabled on July 13, 2007 the Blueprint of Acquisition Reform project. It integrates the original IDS office and related acquisition units to form a special level-1 acquisition department in headquarters. The new unit monitors over twenty plans and acquisition project that worth US\$27 billion in total.⁴ Among them are Rescue 21, Nationwide Automated Identification System and mid-range cutters building. The Reform Act is regarded as the major reform milestones in the administrative system of the Coast Guard and it is believed that it would efficiently monitor the progress of major acquisition projects. The demands for reform are also reflected in the 2009 budget of the U.S. government. President Bush has cut the budget of Federal Emergency Management Agency to US\$1.9 billion from US\$3.2 billion in 2008. Whereas, the budget for border protection and immigration control in 2009 has increased 19% compared to 2008. The budget for the U.S. Coast Guard is US\$7.8 billion and its IDS program also receives an extra US\$200 million in budget to reach US\$990 million. Furthermore, the government also draws up US\$25.5 million to push Nationwide Automated Identification System for a more efficient monitoring on the activities in surrounding waters.⁵

II. Continue capacity building and maintain operation capabilities

In order to get across current hurdles and find alternatives, the U.S. Coast Guard has outsourced private policy analysis team to come up with solution under the circumstance of limited budget and straggled progress. However, in the research on the proposed alternatives of one requisition re-



未改建前的「島」級巡防艦。

圖片來源：

http://cryptome.org/deepwater/IDS_JuneNewsletter.pdf

The Matagorda cutter before modification.

Photo source:

http://cryptome.org/deepwater/IDS_JuneNewsletter.pdf

現行巡邏艦艇延長勤務期限外，並先進行4艘新建87呎巡邏艇的建案工作，以滿足勤務需要。

三、興建嶄新旗艦，依約管理監督

深水計畫中另一項重要的里程碑便是新建8艘418呎長4300噸的國家安全級（National Security Cutter）巡防艦，以取代1960年代開始服役的12艘378呎長3250噸的漢米爾頓級（Hamilton-class）艦，本新艦之設計役期為30年，航速最高可超過28節、最大航程1萬2仟海里，裝置雙空中載具（直升機或無人飛行器等）搭載機房、雙艙放小艇引道，並配備57公厘火炮射控系統與50釐米口徑機砲等武器與尖端指管通勤套件，是海岸防衛隊成立以來所擁有的最大型巡防艦，其首艘艦倍索夫（Bertholf）號已自2007年12月開始進行海上試航。惟近幾個月來，媒體繼續質疑海岸防衛隊對船舶建案的管理監督能力，認為倍索夫號在2002年簽約時規劃在2006年交船，期間雖考量卡翠納颶風（Hurricane Katrina）等事件之應變檢討而決定加（改）裝更先進設備與延後交貨日程，惟結果卻讓造價由原來3億8500萬增加到6億4000萬美元，交艦

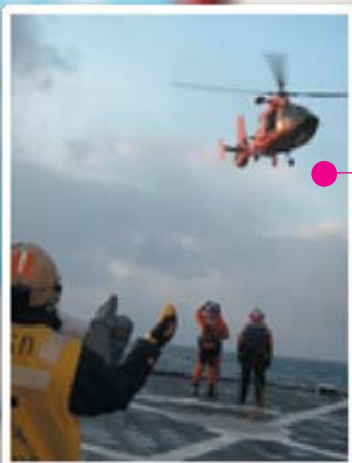
forming plan and two high-level-hazardous-reduction initiatives, the U.S. Coast Guard and analysis team evaluated them unavailable to solve the problem, and then the U.S. Coast Guard decided to propose an improvement strategy by itself.⁶

First of all, in the phasing out aging fleet in the IDS program, as most of the vessels are aging (the average expectancy is 35 years⁷), it originally plans to extend 49 Matagorda cutters to 123 feet from their 110 feet and install them additional communication software suites to extend the expectancy. However, at the time that eight of the modified cutters in 2008 had been found for hull distortion and systematic problems, this project began to incur criticisms.

To get over from this stalemate, the U.S. Coast Guard has hastened the pace in 2007 except from the IDS project to construct 58 fast response cutters which contract is destined to be signed in the spring of 2008. Furthermore the first fast response cutter is going to join the fleet in 2010 and corporately operate with the rest 110-foot long Matagorda cutters. During the interim period, the U.S. Coast Guard has directed the operating cutters to lengthen their duty time and has executed the plan to build four 87-foot ships to meet the service demands.

III. Build new flagships and monitor the progress by contract

One of the major plans in the IDS program is the building of eight 418-foot, 4300-ton National Security Cutters, which will replace the twelve 378-foot, 3250-ton Hamilton-class cutter. The National Security Cutter's designed service expectancy is thirty years, and it also owns the edge of speed over 28 knots and 12000 nautical miles for maximum distance. Being the largest cutter the U.S. Coast Guard has ever had since its establishment, it has dual hangers to accommodate aircrafts (a helicopter or an unmanned air vehicle), boat ramp



艦載直升機降落。

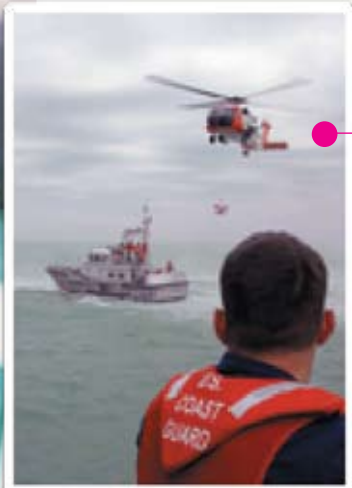
圖片來源：

http://cgvi.uscg.mil/media/main.php?g2_itemId=77427&g2_page=8

The helicopter landing on the cutter

Photo source:

http://cgvi.uscg.mil/media/main.php?g2_itemId=77427&g2_page=8



執行海上空中吊掛救援任務。

圖片來源：

http://cgvi.uscg.mil/media/main.php?g2_itemId=77427&g2_page=15

Helicopter conducting the hoist rescue mission on the sea

Photo source:

http://cgvi.uscg.mil/media/main.php?g2_itemId=77427&g2_page=15

時程也延到2008年4月；另最近又有輿論指證這艘船還有通信系統瑕疵且船體未達30年設計壽命等問題，也讓海岸防衛隊頗覺困擾。

為記取去（2007）年「島」級巡防艦改建的教訓，該隊自倍索夫號交船檢驗開始即嚴格執行，且決定在不設定交船日期的前提下進行，以保證該艦所有設備均如質完成，至於有關合約商的裁處問題再依法解決；另外也由剛成立的採購專責單位針對「島」級巡防艦改建所造成的損失，在2007年12月向深水計畫合約商求償9610萬美元，希望藉此維護該隊應有的權益，也持續推動本計畫的裝備更新工作。

深水計畫是美國海岸防衛隊成軍以來最大型的裝備革新計畫，期程共25年、總金額預估240億美元，包含3種新等級的91艘巡邏艦（國家安全艦、快速反應艦及遠洋巡邏艦）、124艘小型船艇（遠距攔截船及短程檢查船）、195架先進航空機隊（遠距及中距偵察機、多功能艦載直升機、高空與垂直起降無人載具）及先進的全區整合性指管通情與補給保修系統^{註8}。這樣的計畫規模對多數的組織而言均是相當大的挑戰，在須同時應處隨時可能發生的意外挑戰（卡翠納颶風及恐怖活動等天災人禍）

at the stern, 57-mm artillery, 50-mm machine guns and C4ISR suites.

The first cutter-Bertholf was contracted in 2002 and designed to be delivered in 2006. While in response to the accidents like Hurricane Katrina, the U.S. Coast Guard reviewed equipments on board and decided to implement modification which add the price from 385 million dollars to 640 million dollars and postpone the delivery to April 2008. Taking the modified lessons from island-class cutters, it invites U.S. Navy's Board of Inspection and Survey based on its 125 years of naval engineering experience conduct 6-days strict trials. As Bertholf has been evaluated excel quality than new build battle ship, the U.S. Coast Guard accepts it on May 8 and plan to hold a formal commissioning ceremony on August 4. Then the cutter will be turned over to the Coast Guard permanent 122 crew and enter "In Commission, Special" status in the next 22-24 months to ensure the ship meets all technical requirements and the crew is fully trained and certified before it becomes an operational cutter within the Coast Guard's fleet.

The IDS program is the largest requisition plan since the establishment of the U.S. Coast Guard and will be executed in a 25-year with a total budget of US\$24 billion. It will build 91 new cutters in three classes (National Security cutter, Fast Response cutter and Offshore Patrol cutter), 124 boats (Long Range Interceptor and Short Range Prosecutor), 195 aircrafts (Long Range and Mid Range Surveillance Planes, Multi Mission Cutter Helicopters, High Altitude and Vertical Tack-off and Landing Unmanned Air Vehicle) and C4ISR and Logistics systems.⁸ The scale of this program is very challenging to most organizations. Although it has faced numerous difficulties regardless of extra incidental challenges from Hurricane Katrina and terrorists acts, the U.S. Coast Guard has tried their best to set up reformatory measures of monitoring

的狀況下，儘管整個工作到目前為止可以說是命運多舛，但海岸防衛隊已盡力做了許多組織與監督管理機制的改革措施，相信未來必能突破困境、再創嶄新強固的頂尖海上力量。對同樣執行海岸巡防工作的我們而言，若能從本計畫中學到他們面對困境的改革決心與策略，並內化為行動動力及未來推動相關工作之借鏡，絕對是難能可貴的收穫。👍

（本文作者任職於海岸巡防署巡防處）

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and management mechanisms. It is believed that the U.S. Coast Guard can overcome all these difficulties to create a new maritime solidify operative capacity. As we conduct similar duties as the U.S. Coast Guard's, we can learn their determination and strategies while facing difficulties, and convert them into motive energy to become the best valuable profit of our Administration.

(The author is currently with the Coastal Control Department of Coast Guard Administration.)

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