



SUSTAINED EFFORTS Aircraft carrier Varyag being refurbished

Sustained Build-Up

China is the primary trigger factor for naval arms race in the region

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THOUGH THE FORCE MODERNISATION of China's PLA Navy (PLAN) is proceeding apace in terms of hardware, operational skills and expertise, there are indications, including a slowdown in the growth of defence spending and the use of civil agency patrol vessels in the South China Sea, that China is becoming more aware that other countries are using the PLAN's on-going modernisation spree as justification for expanding their own navies, with India, Japan and Vietnam being the main examples here. The result is that this has placed China in the uncomfortable position of being viewed as the trigger for a naval arms race in the region. Two significant events have contributed to the rise of deep-rooted suspicions about the PLAN's intentions in East Asia: construction of the massive Yulin naval base (also known as Sanya Naval Base) in Sanya, China's southernmost city on Hainan Island, which houses both nuclear-powered attack submarines (SSGN) as well as

nuclear-powered submarines (SSBN) carrying submarine-launched, nuclear warhead-armed ballistic missiles; and the creation of a formidable South Sea Fleet with unmatched C4I capabilities.

Earlier, the Yulin naval base, located on the eastern bank of Yulin Bay, had served as a logistics support facility for the PLAN's fleet of diesel-electric submarines. Since early 2000, however, the naval base has expanded into the nearby Yalong Bay, where a major surface fleet base and a nuclear submarine base (called the 2nd Submarine Base) are now co-located. The base contains three finger piers for berthing nuclear-powered submarines, an underground facility for SSBNs, and a submarine demagnetisation facility located on the southern tip of the peninsula. The un-

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derground facility has a large entrance about three metres wide, enough to permanently accommodate at least one Type 094 Jin-class SSBN. Today, Yulin is the most important base of the PLAN's Navy South Sea Fleet, as it is strategically located close to the disputed Xisha (Paracel) and Nansha (Spratly) Islands in the South China Sea, and is also much closer to the sea lanes of communications originating from the Malacca Strait and branching out into the Western Pacific. In the event of naval hostilities in either the South China Sea or across the Taiwan Strait, this base, along with the PLAN's Lingshui air base (also located on Hainan Island and housing the PLAN's 8th Air Division) and a sprawling SIGINT facility manned by the PLAN's 3rd Technical Department, will serve as the C4I hub for projecting a three-dimensional naval armada that will include up to 40 principal surface combatants, 20 submarines, and 100 aircraft, ranging from JH-7A anti-ship strike aircraft to H-6U aerial refuelling tankers, H-6K bombers armed with CJ-10 land attack cruise missiles, as well as KJ-200 AEW & C platforms. Apparently, the PLAN has been building up such power projection capabilities in case it has to deal with 'internal problems of a run-away province' (aka Taiwan) in fu-

ture. Such planning is based on the hard lessons learned from the 1996 Dongshan missile tests, during which Beijing had to swallow its pride and call it a day when the US Navy deployed two aircraft carrier-led battle groups to the Taiwan Strait to stop the 'missile provocations'. But after 14 years of patient and sustained build-up, can today's PLAN stop a US Navy carrier battle group near the Taiwan Strait? Let's hope one will never find out.

Sustained Expansion

Of the 65 shipyards operational within China, the principal ones engaged in warship construction are: Dalian Shipbuilding Corp, Shanghai JiangNan ChangXing Shipbuilding Base, Huangpu Shipbuilding Corp, Hudong Shipbuilding Co, Bohai Shipbuilding Heavy Industry Co. (formerly known as Huludao), Huangpu Shipyard, Qiuxin Shipbuilding Factory, Guangxi Guijiang Shipyards, and Wuchang Shipbuilding Industry Co. Collectively, these shipyards played a crucial role in sustaining the PLAN's first shipbuilding boom from 2002 to 2007 in the new millennium. Between 2001 and 2005, the PLAN had laid down keels for six guided-missile destroyers (DDG), namely two 7,000-tonne Type 051C Luzhou-class, two 5,850-tonne

Type 052B Luyang 1-class, two and two 6,100-tonne Type 052C Luyang 2-class, six new 3,600-tonne guided-missile frigates (FFG) of the Type 054 Jiangkai and 054A families, more than 60 Type 022 Hobei-class 224-tonne catamarans armed with C-802A anti-ship cruise missiles, about 12 Type 039G Song-class and Type 041 Yuan-class diesel-electric SSKs, and even larger replenishment ships and multi-role support vessels. Following that, in 2008 and 2009 there was a lull and only saw the launch of a large hospital ship and a new submarine tender. Part of the reason for this slow down was the move of JiangNan Shipyard to ChangXin. A larger reason for this is the sheer number of new-generation hardware coming into service that was simply overwhelming the PLAN's ability to absorb and master them. A final reason was the PLAN's philosophy for introducing new platforms. The PLAN typically makes a huge leap in the first prototype while continuing to building ships of existing variants. Once all of the problems in the first prototype are sorted out (during a four-year period of which three years are taken for warship construction and one year for sea trials), mass production of the new class of vessels get underway. During this period, the PLAN continues to make smaller

tweaks in the new warships until the end of the production run.

All indications are that the period from 2009 to 2013 will see yet another shipbuilding boom. For, despite a host of unresolved issues, the PLAN is getting closer to realising its ambition of possessing aircraft carrier-led battle groups in terms of leadership endorsement, financial affordability, naval strategy, and requisite technologies. As of now, the PLAN wants to deploy medium-sized aircraft carriers in the medium-term for near-seas missions and to gain operational experience so that it can develop larger carriers for far-seas operations in the long-term. The PLAN's Shanghai Research Institute has been spearheading its plans for acquiring a fleet of 48,000-tonne aircraft carriers, LPDs, and helicopter landing decks (LHD) for the past 25 years. In the early Eighties, water-tunnel scale-models of such vessels were constructed and tested in the Institute's 600-metre (656-yard) pool and at Tai Lake in Jiangsu Province. In 1985 the PLAN began a training course for future aircraft carrier/LPD/LHD commanders at its Guangzhou Naval Academy. In January 1993, the PLAN decided to firm up plans for acquiring a 64,000-tonne displacement aircraft carrier under the 9935 Shipbuilding

South Sea Fleet

HQ at Zhanjiang Naval Base in Guangdong Province

9th Destroyer Flotilla: DDG-168 Guangzhou, DDG-169 Wuhan, DDG-170 Lanzhou, DDG-171 Haikou

1st Frigate Group: FFG-564 Yichang, FFG-565 Yulin, FFG-566 Huaihua, FFG-567 Xiangfan

2nd Destroyer Flotilla: DDG-161 Changsha, DDG-162 Nanning, DDG-165 Zhanjiang, DDG-166 Zhuhai, DDG-167 Shenzhen

17th Frigate Group: FFG-552 Yibin, FFG-553 Shaoguan, FFG-555 Zhao-

tong, FFG 509 Changde, FFG-510 Shaoxing

18th Frigate Group: FFG-551 Maoming, FFG-554 Anshun, FFG-557 Jishou, FFG-558 Beihai, FFG-559 Foshan

2nd Submarine Base housing the 32nd Submarine Flotilla: Type 039A SSK-313, SSK-326, SSK-328, SSK-329, SSK-330, SSK-370; and 2 x Kilo-636M SSKs; and the 52nd Submarine Flotilla: Type 039A SSK-301, SSK-304, SSK-305, SSK-306, SSK-307, SSK-308, SSK-309, SSK-310, SSK-311, SSK-312

6th Landing Ship Flotilla's 2nd Landing Ship Group: LCT-934 Dan Xiashan, LCT-935 Xue Fengshan, LCT-937 Qing Chengshan, LCT-990 Wu Dangshan, LCT-991 Er Meishan

16th Landing Ship Group: LCT-992 Huan Dingshan, LCT-993 Luo Xiaoshan, LCT-994 Dai Yunshan, LCT-995 Wan Yangshan, LCT-996 Lao Tieshan, LCT-997 Yun Wushan

17th Landing Ship Group: LCT-946 Songshan, LCT-947 Lushan, LCT-948 Xueshan, LCT-949 Hengshan, LCT-950 Taishan

11th Fast Craft Flotilla's 2nd Missile Corvette Group: MCV-751, MCV-752, MCV-753, MCV-754, MCV-755, MCV-756 Fuding

84th Submarine chaser Group: PC-694 Ruian, PC-697 Anji, PC-727 Wuchuan, PC-731 Haishou, PC-786 Wanning, PC-787 Ledong, PC-788 Ding'an, PC-789 Lingao

4th Landing Ship Group: LCT-945 Huashan, LCT-973 Wu Zhishan, LCT-974 Lian Huashan, LCT-977 Ding Junshan, LCT-979, LCT-980, LCT-986 A'Lishan

26th Fast Craft Flotilla's 10th Minesweeper Group: MSC-809 Changning, MSC-835, MSC-836, MSC-837, MSC-838, MSC-850

Programme. In parallel, work began on expanding and upgrading the PLAN's naval bases and harbours in Shanghai, Zhejiang, Yulin and Dalian. In 1995-1996 two European countries-France and Spain — approached China for industrial cooperation in LPD/LHD technologies. In February 1995 the Spanish ship-builder Empresa Nacional Bazan (now Navantia) offered to build for the PLAN a low-cost, lightweight conventional-takeoff-and-landing (CTOL) aircraft carrier-cum-LHD. Navantia proposed two designs: the 23,000-tonne SAC-200 (overall length 728 feet, or 221.8 metres) LPD; and the 25,000-tonne SAC-220 (overall length 787 feet, or 240 metres) LHD. The cost of building either of the two vessels was then pegged at USD 400 million. The SAC-220 could accommodate up to 21 CTOL combat aircraft or medium-lift helicopters. According to Navantia, the first carrier could be delivered within five years, with the second 42 months later. At the time, Navantia was constructing the 11,500-tonne aircraft carrier 'Chakri Naruebet' for the Royal Thai Navy and was eager to secure further orders in East Asia. China expressed an interest in the proposal, and initial talks between the COSTIND and Navantia were held in January 1996. However, according to Navantia offi-

cial, COSTIND officials seemed more interested in obtaining the blueprints of the aircraft carrier than in ordering the actual vessel off-the-shelf. In November 1997, however, Beijing had shelved plans to build fixed-wing aircraft carriers in favour of smaller LHDs and LPDs.

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The PLAN formally revealed its decision to build aircraft carriers equipped with short takeoff but arrested recovery (STOBAR) flight decks in November 2008, following which the state-owned China Shipbuilding Industry Corp's (CSIC) 701 Design Institute began establishing the Huang Jiahu 'aircraft carrier laboratory' site just south of Wuhan city, next to the Wuhan University of Science and Technology's Huangjia Lake Campus. At around the same time, senior PLAN officials had remarked

that China plans to launch its first indigenous 48,000-tonne aircraft carrier in 2012, and to build up its first aircraft carrier battle group before 2015. In May 2009, the then Brazilian defence minister Nelson Jobim revealed that China and Brazil had reached a training agreement to stage PLAN officers on board the NAe Sao Paulo, Brazil's Clemenceau-class aircraft carrier. A formal agreement to this effect was inked a month earlier that year when the Brazilian Navy Chief, Admiral Carlos Soares de Moura Neto, flew to Qingdao to attend the PLAN's 60th Anniversary Naval Review. Moreover, China has been pouring resources into refurbishing the decommissioned 56,000-tonne Soviet aircraft carrier Varyag, most likely as a training platform for naval aviators.

Meanwhile, the state-owned China State Shipbuilding & Trading Corp (CSTC), a subsidiary of the China State Shipbuilding Corp (CSSC) on November 16 launched the PLAN's second Type 071 landing platform dock (LPD) at its Shanghai-based Hudong Zhonghua Shipbuilding facility. It may be recalled that on 6 July 2008 commissioned its first Type 071 Landing Platform Dock (LPD) that has since been used for both tri-services operational logistics as well as civilian disaster relief operations.

Patrol Craft Group: 1st Unit, 2nd Unit, 3rd Unit, 4th Unit

208th Missile Craft Group: 12 x Type 022 Hobei-class catamaran

3rd Support Ship Flotilla: AOR-883 Yang Chenghu, AOR-884 Jing Bohu, AOR-885 Qing Haihu, AOR-887 Wei Shanhu

Service Ship Group: Nanyou-961, Nanyun-957, Nanqin-203
Instrumentation Ship Group: Nance-420, Nance-429, Li Siguang, Nanbiao-463,

Reconnaissance Ship Group: Nandiao-412, Nandiao-411, 233, 234, 235, 509, 852, 816, 815, 822, 819, 820

Shantou Marine Guard District's 5th Missile Corvette Group: MCV-674 Pingnan, MCV-677 Tian'e, MCV-766, MCV-767 Fu'an, MCV-774 Lianjiang, MCV-775 Xinhui

2nd Frigate Group: FFG-560 Dong-

guan, FFG-561 Shantou, FFG-562 Jijangmen, FFG-563 Zhaoqing

Beihai Marine Guard District's 81st Submarine chaser Group: PC-721, PC-722, PC-723, PC-728, PC-729, PC-732 Ningyuan

76th Submarine chaser Group: PC-678, PC-720, PC-724, PC-725, PC-726, PC-730

Guangzhou Support Base's Service Ship Group: 2nd Surveillance Brigade, Dongguang Silo

Yulin Support Base: AOR-863 Chang Xingdao,

Sanya Rescue Ship Group: Nanjiu-502, Nanjiu-503, Nanjiu-510, Nantuo-154

Service Ship Group: Nanshui-960, Nanyun-831, Nanyun-832, Nanqin-202, Nanyou-967, Nanyi-09, Independent 46th Land-based Anti-ship missile Battalion, 7th AA-gun Air Defence

Regiment

Xisha Marine Guard District Zhanjiang Support Base: Base Communications Station, Ship Technological Maintenance Team, Equipment Technological Maintenance Team, Zhanjiang Arsenal
Nansha Patrol Region's Shajiao Training Base

8th Aviation Division: 22nd Air Regiment, 24th Air Regiment

9th Aviation Division: 25th Air Regiment, 27th Air Regiment, 7th Air Regiment (Helicopters), 3rd Radar Brigade

Marine Corps 1st Brigade with Amphibious Armour Regiment, Reconnaissance Group, 1st Battalion, 2nd Battalion, 3rd Battalion, Howitzer Battalion, Air Defence Missile Battalion.

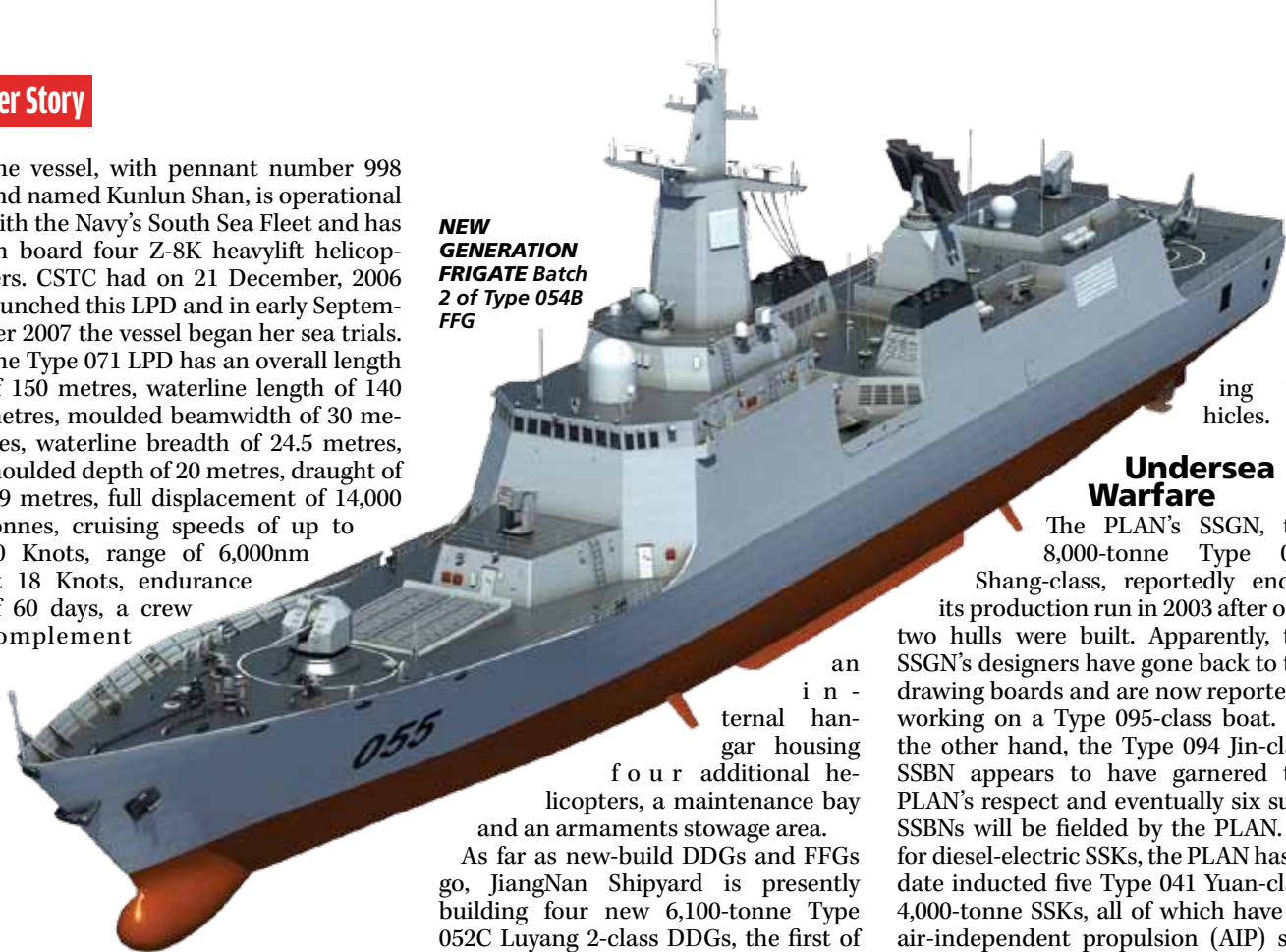
Marine Corps 164th Brigade
Combat Ship Group in Hongkong SARh Sea Fleet

The vessel, with pennant number 998 and named Kunlun Shan, is operational with the Navy's South Sea Fleet and has on board four Z-8K heavylift helicopters. CSTC had on 21 December, 2006 launched this LPD and in early September 2007 the vessel began her sea trials. The Type 071 LPD has an overall length of 150 metres, waterline length of 140 metres, moulded beamwidth of 30 metres, waterline breadth of 24.5 metres, moulded depth of 20 metres, draught of 5.9 metres, full displacement of 14,000 tonnes, cruising speeds of up to 20 Knots, range of 6,000nm at 18 Knots, endurance of 60 days, a crew complement

comprising 30 officers and 145 other ranks, a stern-mounted helicopter deck, a 4-metre wide 308-lane metre internal vehicle garage, a deck-mounted flight deck measuring 50 metres by 30 metres, 450 square-metre internal hospital deck, a twin-door cantilever hangar measuring 18.5 metres by 23 metres by 8 metres, and a dry dock measuring 40.4 metres by 15.4 metres by 8 metres.

Construction is now underway of the PLAN's first Type 081 LHD helicopter carrier, whose design was frozen in late 2006, following conclusion of the third critical design review. Subsequently, the Dalian-based and Wuhan-based shipyards of CSIC were awarded contracts to undertake detailed engineering drawings using TRIBON design software for various bulkheads and compartments of the LHD. Present plans call for Dalian Shipyard to build three LHDs and Wuhan Shipyard to build another three. On-board sensors and systems identical to those on board the Type 071 LPD will be installed on board the Type 081 LHD, with the principal differences being the top-deck superstructure that will house the island (incorporating the bridge and combat management system) as well as a flat-top deck capable of housing eight heavylift helicopters, twin elevators, one Type 730 close-in weapon system, and

NEW GENERATION FRIGATE Batch 2 of Type 054B FFG



an internal hangar housing four additional helicopters, a maintenance bay and an armaments stowage area.

As far as new-build DDGs and FFGs go, JiangNan Shipyard is presently building four new 6,100-tonne Type 052C Luyang 2-class DDGs, the first of which was launched on November 27. In future, Beijing plans to build a new generation of large DDGs each displacing 10,000 tonnes. As far as FFGs go, the ninth 054A-class vessel was launched at Huangpu Shipyard in Guangzhou last August. FFGs of this family are being built concurrently by both the Shanghai-based Hudong-Zhonghua Shipyard and Guangzhou-based Huangpu Shipyard, both part of CSSC. A total of 12 Type 054/054A FFGs will be in service by 2015. At Huangpu Shipyard, work has started on four new large replenishment ships to supplement the two existing ships--886 and 887. Meanwhile, construction of the Type 022 Hobei-class catamarans, underway since April 2004, has since slowed down at the Qiuxin Shipbuilding Factory at Shanghai, and at Guangxi Guijiang Shipyards. Even if the build rate now is only two per year at these smaller shipyards, the PLAN could easily have more than 100 Type 022s in service by 2015. The PLAN has now begun deploying a new-generation of ocean-going minehunters and minesweepers — Type 081 and Type 082II vessels. Four units of the former have been built to date at a cost of USD 37 million. The 600-tonne Type 082II steel-hulled minehunter bears a close resemblance to the German Ensford-class minehunter, and it has on board up to three different types of remotely operated minesweep-

ing vehicles.

Undersea Warfare

The PLAN's SSGN, the 8,000-tonne Type 093 Shang-class, reportedly ended its production run in 2003 after only two hulls were built. Apparently, the SSGN's designers have gone back to the drawing boards and are now reportedly working on a Type 095-class boat. On the other hand, the Type 094 Jin-class SSBN appears to have garnered the PLAN's respect and eventually six such SSBNs will be fielded by the PLAN. As for diesel-electric SSKs, the PLAN has to date inducted five Type 041 Yuan-class 4,000-tonne SSKs, all of which have an air-independent propulsion (AIP) system on-board. Launched between 2004 and 2008, they were all built by Wuhan Shipyard. The workhorse of the PLAN's SSK fleet, however, are the 2,250-tonne Type 039 Song-class boats, the first of which appeared in 1994. Three more (Type 039A) followed between 2001 and 2003, followed by nine more (Type 039G) in 2007 and 2008. The latest SSK design to emerge is the Improved Yuan-class boat, which appears to incorporate Russian design influences, including a stouter hull with a reduced aft taper similar to the Amur 1650 SSK, plus an elongated sail and hull-mounted retractable hydroplanes similar to the Project 636M Kilo-class SSK.

However, in contrast to the sails of the Kilo- and Amur-class, the new Improved Yuan SSK incorporates hydrodynamic elements such as an intricately-faired leading edge with concave and convex curves. As of right now, the PLAN's operational SSK fleet includes two Project 877EKM Kilo-class boats, 10 Type 636M Kilo-class vessels, nine Type 035 Ming-class SSKs, 13 Song-class SSKs, five Yuan-class SSKs built by WuChang Shipyard, and the solitary Improved Yuan, accounting for 41 new SSKs acquired by the PLAN since 1994. The PLAN is likely to add another nine Improved Yuan-class SSKs by 2015, and an additional ten by 2020, along with six Type 095-class SSGNs. ||