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Vol XXIII No 96
Feb 2019 to Apr 2019

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The Sea Our Strength

Our goal is to raise awareness of our seas and to rekindle maritime consciousness and pride.

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SeaGull is Published by

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Koregaon Road, Pune- 411001.
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Designed & Printed by - www.ornateindia.co.in

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Editorial

IMF and the Maritime fraternity began the last quarter on a sombre note with the passing away of the to much admired and legendary Vice Admiral MP Awati on 04 Nov 2018. He was a great friend and supporter of the IMF who also founded the Maritime History Society and introduced Ocean Sailing in the Navy. An obituary finds a place in this issue.

We were also grieved on the demise of our old member Capt Uday B. Palsule on the 13 Jan 2019. He was associated with the IMF from the very beginning. He will be missed by us.

On 12 Nov 18 the first container vessel reached Varanasi from Kolkata, opening a new chapter in India's economic history. Prime Minister Narendra Modi received the vessel and launched the first multi-modal terminal on the Ganga river in Varanasi under a project aimed at promoting inland waterways as a cheaper and more environment-friendly means of transport.

On 16 Nov 2018, Cyclone Gaja devastated several districts in coastal Tamil Nadu. At least 46 individuals were killed, an estimated 250,000 were displaced, and over 85,000 homes were damaged or destroyed.

On 17 Nov Council Members of IMF laid wreaths at Seamen's War Memorial paying homage to 7955 Indian Seamen who sacrificed their lives during both World Wars.

On 23 Dec IMF/Society for Indian Marine Artists conducted a Fun Fair at Empress Garden, Pune for young enthusiasts. Earlier on 15 Dec, Junior SIMA painting competition was held and prizes were awarded

The year 2018 was an important milestone in the history of IMF, having completed 25 glorious years. On 14 Jan 2019, we were proud to celebrate our Silver Jubilee with fervour and gaiety. We were fortunate and honored to host the former Chief of Naval Staff Adm Arun Prakash as our chief guest. Several honorary foreign correspondents of Seagull and luminaries from the Armed Forces and Merchant Marine graced the occasion. The admiral gave an informative talk on the Indo-Pacific security scenario.

In this issue I am pleased to include interesting articles covering Brief History of IMF, Bombay Steam Navigation Co, Geopolitics and International Law and Canada's Autonomous Unmanned Vehicle capability besides other usual features.

NOTICE BOARD

- Feb 2019 - ICC 2018 Valedictory Function at Boat Club, Pune
- 5-6 March 2019 - Indo-Pacific Regional dialogue by National Maritime Foundation, Delhi
- 12-14 Mar 2019 - SIMA Exhibition at Bal Gandharva Kala Dalan, Pune

Letters to Editor

Dear Sir,
Really enjoyed the last Seagull especially the articles on teaching the young, John McCain and the Northern Sea route. It is a great publication and I have enjoyed each and every one I have received.

Thank you,

Cmde George McKee, USN (Retd)
Greenwood, South Carolina, USA.

Dear Sir,
On the occasion of 25th anniversary of IMF, I renewed earlier connections. Please feel free to share this letter with the remaining committee Members.

Renewing earlier connections, Mrs. Kunte was the first person we came across. Capt. Rabi Misra at the entrance door was the next one. The Editor of our magazine was instrumental in introducing us to so many others. Capt. Ravi Hajarnavis proved a wonderful link to the past, as did Capt.

Honavar Jr. (His father and my father were shipmates). Being introduced to Satish Godbole Esq. as well as Mr. and Mrs. Mahajan turned out to be an absolute bonus. Cmde and Mrs. Chitnis were their usual lively selves.

V Adm Awati will certainly be missed. The issue that you raised of an ageing profile of IMF members is staring us in the face. I've tried to increase awareness amongst younger seafarers and a young couple signed up with Capt Mishra during the function. Hope to get more through the door.

Once again, thank you ever so much for your hospitality and you have certainly set the bar high for us to achieve. I pray for wind in your sails.

Kindest regards,
Sukerna Amirapu
Auckland, New Zealand.

The 1st International Shipmasters' Congress
Future Skills Requirements for a Digitized Maritime Industry
The India Habitat Centre, New Delhi, India
25-27 September 2019

ISC '19 Invitation to submit abstracts. IFSMA, the International Federation of Shipmasters' Associations, and CMMI, the Company of Master Mariners of India, cordially invite all members of the maritime / marine scientific and professional community to submit abstracts for oral or poster presentations at ISC '19, the International Shipmasters' Congress 2019, which is scheduled to be held from 25 to 27 Sept 2019 at the Stein Auditorium, India Habitat Centre, New Delhi, India addressing the theme ***Future Skills Requirements for a Digitized Maritime Industry.***

Topics related to the ongoing digitization of the maritime industry:- Conceptual Aspects, Technological, Operational, Human Resource, Safety and Security and Legal Aspects

ISC '19 Deadlines : Abstract Submission : 01.03.2019, Full Paper Submission : 01.06.2019
Registration Deadline: 20.09.2019.

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Why Good Controls Are Essential Basics

By Capt SA Kanetkar (Retd)

A plethora of OEM (Original Equipment Manufacturer) control systems that required a huge number of diverse spares to support them, was never a practical proposition and did not make sense. This situation should have been corrected decades back.

I was posted onboard INS *Vindhyagiri*, as its Chief Engineer, in end 1995. The vessel was the flag ship of the Eastern Fleet, and I replaced my predecessor (a very fine officer), who was unfortunately, 'signal transferred' out. He was posted to the vessel without having a steam background, which was a very wrong move by NHQ, in the first place, as succeeding events will show. *Vindhyagiri*, was a Leander class steam ship with a 'Y-160' closed loop, steam propulsion system. Due to a very poor refit (at Mumbai) and lack of spares, most, *important equipment were on 'manual control'*, an extremely hazardous situation for a vessel to be in. The main boilers were on manual control (prohibited by a Navy Order), the diesel generator had its safeties malfunctioning, and most gauges defective (again prohibited), the turbo-generators (TA) were unreliable with their two stage control rods erratic. To top it all, *the feed water distilling plants were also on manual control*. Without spares, it was an uphill task to operate the equipment on board. Proprietary PCBs, gauges, safety cutouts, pneumatic control spares, all of foreign origin, were just not available, and NACs (non availability certificates) were routinely issued, by the concerned authorities, to completely wash their hands off the problem. How did the vessel get past the 'work-up' team at Kochi, in the first place, is a mystery? She had just completed an extended refit of over 4 years, at Mumbai. The vessel, ought not to have been declared 'operational', with this litany of very serious defects.

It took us a good part of two months, to slowly get

things under a semblance of 'reduced disorder', yet the situation was always very critical. Deploying extra watch keepers for important machinery like boilers, TA and the feed water generators was the only way out. Despite these severe drawbacks, the ship met all commitments, and successfully sailed for about 150 days in 1996, flying the admiral's flag over the Bay of Bengal and up to Port Blair on numerous occasions. That difficult tenure, of 18 months, scarred me, and left a lasting impression, while raising some serious issues. Obviously, SOLAS was not a byword in the navy, or was being deliberately given a go-by. Either way, engineering controls were not being given the importance they deserved. Even a layman would understand *Vindhyagiri's* state, as being very abnormal and unsafe. A merchant ship in this condition, would have been immediately arrested and lose both her Classification as well as her insurance cover. In the merchant marine, the important questions asked, are mostly SOLAS related, and invariably hinge around control systems, redundancy issues, back-up measures and emergencies. Standards and procedures in the navy should always be far superior to those followed in the merchant marine, and astonishing experiences (like *Vindhyagiri's*), must never befall future crews. I, later realised, that such situations, were the creation of those, who had long lost their 'sea legs', through multiple tenures in Lutyen's Delhi.

Providentially, in 1999, I was posted to NHQ, as Joint Director, Systems Integration (MESI), a newly created post. The P-17 (Shivalik class) was the first project on my plate. I had already decided to introduce a unified control architecture for the control system of P-17, to get rid of the numerous and plethora of proprietary controls. I had a deputy who was an acknowledged controls expert and I was pleasantly surprised to know that he was already

broad technical specs for an open architecture, non-proprietary, digital control system. As of then, the German F-124, Sachsen class frigate (undergoing trials) was the only ship worldwide, to have such a unified control system. The under-building *Queen Elizabeth* was also slated to have a similar system. This FADEC (full authority digital electronic control) system, ***had to be*** the future way ahead, for our engineering controls. It had more than sufficient bandwidth to cater to even the automatic power management system plus the bridge navigation controls, but turf battles (at NHQ), ensured that only the engineering controls remained within its ambit.

The control system would have two independent fibre optic buses running diagonally around the hull (with two interconnecting junctions). Each equipment would be connected to this bus via two independent and differently located RTUs (remote transmitting units), for sake of redundancy. The system would have the dynamic analysis data of every equipment, so that the control system could ensure operation of every equipment(s) within their safe operating envelope. Equipment parameters would be fed to the controls via the two RTUs operating intermittently (channel 1/channel 2). The entire system would have just one type of non-proprietary programmable PCB. In the event of a PCB becoming defective, a new spare was to be inserted, as a 'hot change', and the system would detect and automatically configure it for the function it was to intended to undertake. All remote displays would be soft displays (in addition to the local gauges). The system was designed to be fully functional even if the data bus was damaged at three locations (triple redundancy). Apart from being a great control system, it would also perform another very important role - that of machinery integration. Readers will appreciate how, advanced control systems can cause generational shifts in performance.

Initially, our controls proposal met with very stiff resistance from many quarters, within NHQ. How could the engineers decide on such an important control system, when they have no domain knowledge? What was the need for such a change? Why go for a new system, when present ships don't have them and *when all is well?* So, the FADEC controls was an antithesis to the thought processes of many, in NHQ, even among the higher ranks. It was an unthinkable paradox. Even the shipyard opposed it based on some half baked inputs! The control system would surely have been scuttled, but for the fact, that we had an ace up our sleeves. The GE LM-2500 gas turbines and the main diesels to be fitted on P-17 were to be ordered shortly, and unknown to the general intelligentsia, these were to be ordered with IEC controllers! An IEC GT differs from a normal GT, in many ways, and requires a FADEC compliant control system, that will make it's operation 'fail-safe', in all regimes of operation. Once the GTs were ordered, the type of control system virtually became a *fait accompli*, and made our case stronger. This, though was still hard for many to digest, and doubts kept lingering on. By the time the control system was finally ordered, the dealing-file had already reached Vol-IV in less than 18 months, having made multiple rounds of NHQ.

With the ordering of the integrated machinery control system (IMCS) for P-17, a new era was ushered in, for engineering controls. The P-17 was then followed up by similar orders for other frontline, new builds. Much like in the book, 'The Tipping Point' (by Malcolm Gladwell), the navy soon realised that any ship that did not have an IMCS, *Must Have One! Finally*, the ghosts of the navy's engineering controls were laid to rest.

(This story, is old hat, and INS Vindhyagiri does not exist anymore but, she played her role in charting the future course of engineering controls).

Capt. S. A. Kanetkar

The Last Sail-Driven Tanker

The Falls of Clyde, the last sail-powered oil tanker in the world, will soon return to Glasgow, the city where her keel was laid some 140 years ago. The *Clyde* has been moored in Honolulu, Hawaii since 1963, and she is in deteriorating condition. A non-profit group, **Save the Falls of Clyde International**, hopes to move her to Scotland and restore her. It has recently reached an agreement with heavy lift firm Sevenstar Yacht Transfer to provide the transportation. She is scheduled to depart in February 2019. The 285-foot long, wrought-iron cargo *Falls of Clyde* was built by Russell & Co. in Glasgow in 1878. She entered service as part of the Falls Line fleet, and she sailed to ports in all continents except Antarctica. In 1898, she entered in the sugar trade between Hawaii and the U.S. West Coast for owner Capt. William Matson. She was converted to carry oil and molasses in 1906, and her 10 tanks have a capacity of about 18,000 barrels. She was later used for floating oil storage in Alaska, and was finally decommissioned in the

1950s. A local journalist in Honolulu raised funds to save her and bring her to Hawaii, and the U.S. Navy provided a tow to bring her to Oahu in 1963.

The local Bishop Museum took possession of the vessel and opened the *Falls of Clyde* to the public in 1971 at Honolulu Harbor's Pier 5. However, her condition has deteriorated over the years, and in 2016, the museum transferred her to a local non-profit, **Friends of Falls of Clyde**.

After she is moved to Scotland and restored, **Save the Falls of Clyde International** eventually hopes to return the vessel to commercial trade for sail-driven niche cargoes, like sustainable coffee and chocolate. The group would also like to host education-at-sea voyages.

Courtesy: Save the Falls of Clyde

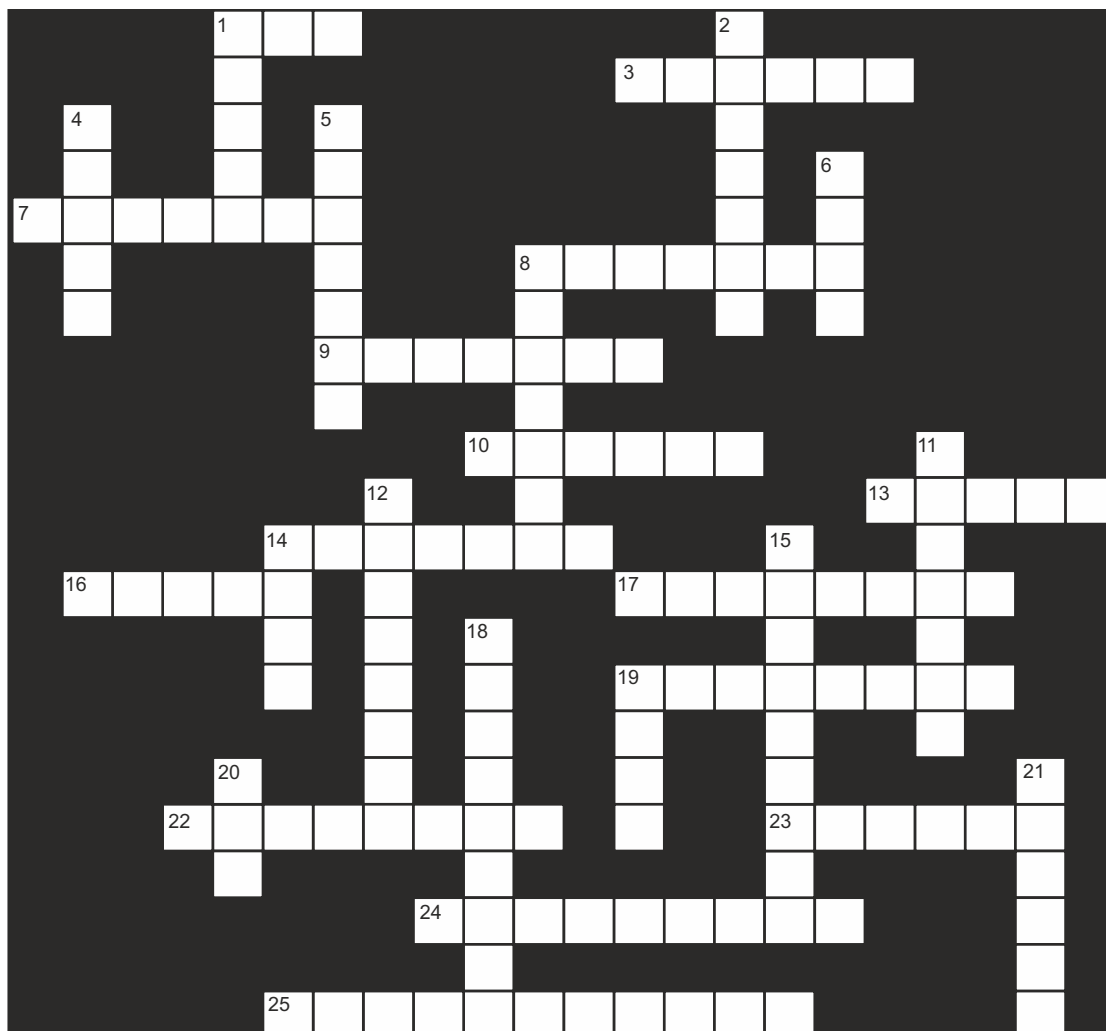


Falls of Clyde

Maritime Crosswords

By Cdr Sati Taneja

This Crossword consists of nautical terms and clue which mariner would be familiar with



Across

1. Floating barrier
2. Compartment in bottom where sludge or spillage collects
7. To sink
8. Shows heading of ship
9. Fast sailing ship of 19th century
10. Kitchen
13. Device that detects ships and objects
14. Horizontal direction of object in degrees from north
16. The wedge shaped part of anchor that digs into the seabed
17. Mast in front of ship
19. A compartment at the front of the ship formed by the peak
22. Mast in front
23. Grounds ship
24. Strong shutter used to cover porthole-used in bad weather
25. Deck in the rear of ship (2 words)

Down

1. Step onto ship
2. Debris or cargo from a shipwreck
4. Pulley
5. Device to lift loads
6. Senior sailer in charge of seamanship and deck
8. Boss
11. Machine that hauls ships anchor cable or ropes
12. Officer's mess in naval ship
14. Make fast
15. Conveys orders to engine room
18. Platform on mast for lookouts (2 words)
19. Forward
20. Direct the ship
21. From where ship is controlled

IMF 25th Anniversary Celebration

By Capt AC Dixit

When Cmde Rajan Vir and a handful of his friends conceived the idea of founding an organization for spreading awareness of the oceans in 1993 - in a land-locked Pune, they could not possibly have known how long the fledgling organization was going to survive. But survive it did and flourished beyond imagination as the years passed. On 14th January 2019, The Indian Maritime Foundation celebrated the 25th Anniversary of its founding at the Central Park Hotel in Pune.

It was indeed a memorable occasion and was celebrated with due pomp and style. Adm Arun Prakash, former Chief of Naval Staff and a longstanding friend of IMF was the Chief Guest. He was kind enough to travel all the way from Goa for the occasion. The galaxy of guests

comprised serving and retired officers of the Defence Forces, Honorary Correspondents of IMF from India and overseas, sponsors and supporters of IMF Council members and their spouses, representatives of sister organizations such as The Company of Master Mariners of India and well wishers of IMF.

The proceedings began with the traditional lighting of lamp followed by the welcome address by Cmde R Vir, President IMF. Cmde Vir welcomed the Chief Guest and the others present, and then went on recall the 25-year long journey of the IMF. He dwelt at length upon the various activities taken up by the IMF in the pursuance of its goal.



Admiral Arun Prakash lighting the lamp



Adm Arun Prakash Cutting the Cake-14 Jan 19

After Cmde Vir's welcome address, the Chief Guest Adm Arun Prakash was invited to deliver his talk, the subject of which was 'The Dynamic Indo-Pacific Scenario and India's Role in Maintaining Stability'.

He handled the complex subject with consummate ease and held the audience spell

bound throughout his talk. Going back in world history several centuries, he traced China's rise to power, its ambitions and the implications for the Indo-Pacific Region.

With the formal part of the programme over, it was now time to begin the festivities and this was done with great enthusiasm. The 25th Anniversary Cake was cut by Adm Arun Prakash. There was a lively interaction among the guests over cocktails. This was also an opportunity to meet IMF's Honorary Correspondents and exchange notes with them. The presence of RAdm Valere Ortoli from Toulon (France), Mr S Amirapu from Auckland (New Zealand), Mr Atul Vir from Houston (USA), Mr Rahul Vir from Miami (USA) and Cmde Anil Jai Singh of Delhi Branch, convincingly brought home the national and international reach of IMF.

The dinner that followed was sumptuous and delicious. It was a fitting tribute to the hard work and dedication of 25 years.

Mr Yezdi Batliwala proposed the vote of thanks for the successful event.

Cmde Ajay Chitnis as the Master of Ceremonies conducted the event in his usual impeccable style.

Capt AC Dixit is Vice President of IMF



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The Bombay Steam Navigation Co's Northern Service to Karachi

By Ambrose Greenway

The Bombay Steam Navigation Co was established in 1845 under the chairmanship of a senior official, namely Collector of Land Revenue Gregory Grant. Amongst the 8-man board were three locals: Jeejeebhoy Dadabhoy, Jugganath Sunkersett and Dadabhoy Rustomjee. It aimed to operate passenger and cargo services northwards to Gujarat and southward to the Ceylonese port of Galle, there to connect with the Peninsular & Oriental Steam Navigation Co's steamers. Calls were made at several small ports *en route* on the latter and the first ship to be employed was the 269grt paddle steamer *Victoria*.

At this time P&O's steamers only called at Bombay and Galle but the BSN chairman used his influence by threatening to deny the company government cargo if it did not call at Indian way ports to land senior Government officials. P&O relented and set up its own coastal service in opposition to the Bombay company, initially with help from the Ceylonese government, but it later withdrew leaving the field open to BSN once more. Despite this, the competition had dispirited the Bombay concern which had never made a profit on the southern route. It had only made money on the northern service to Goga and Surat (extended to Karachi in 1854) using steamers such as *Bombay*, *Dwarka* and

occasionally *Victoria* and *Surat*, but by 1863 lassitude and a number of accidents had forced the company into liquidation.

The operations of the failed company had nevertheless been valuable and a new British company was quickly formed to take them on. Named the Bombay Coast & River Steam Navigation Co Ltd, it was managed by Captain Joseph Shepherd, who had gained experience with the BSN. A large and forceful man with a fiery temper, he and his equally portly wife were each reputed to need two chairs during a visit to a local port in Kathiawar! Notwithstanding that he was a man of immense vision if a little impetuous at times.

The company operated until 1868 when the bankruptcy of its main agent, Fulcher, Cooper & Co, forced it into liquidation. However Shepherd was on good terms with Crawford, the Commissioner of Bombay, and in 1869, after securing a contract to run steam ferries within Bombay harbour, set up a new company under the original BSN title in equal partnership with bookseller Hadji Hassan Yousub, whose brother Cassam was well known in the pilgrim trade to Jeddah. The company was registered at an address it shared with the British India Steam Navigation Co. in London.



Sabarmati at Cochin, March 1965

The new concern soon branched out into coastal services, northwards to the Gulf of Cambay, Surat later being substituted for Goga and southwards to Goa and Mangalore. Sadly Hassan Yousub drowned after diving off one of the company's ships in 1872 and his half share in the company was divided between his two sons Hadji Ahmed (3/16ths) and Hadji Ismael (5/16ths).

Competition on the northern route came from the Kutch-Mandvi Steam Navigation Co's 425grt *Hindoo* which was reputed to make 15 knots. On 8th November 1888 Shepherd's three-year old steamer *Vaitarna* (292grt) disappeared off Mangrol during a cyclone whilst *en route* from Dwarka to Bombay. All 746 aboard perished, resulting in the disaster being referred to in local folklore as India's *Titanic*.

The BSN's smart livery of red funnels with black top, brown upperworks and white tipped foremasts became a familiar sight in Bombay. The Kutch/Mandvi line was locally known as the



Sarasvati on speed trials (1949)

Hadji Cassum Line and the line to Goa and beyond as the Shepherd Line. The ships employed on the northern route were generally larger than their southern counterparts with raised forecastles and their three cargo holds were each served by a pair of deck cranes. The Gujarati wayports were no more than open anchorages, necessitating transfer of passengers and cargo by small boat and as a result calls

omitted during the monsoon season.

Shepherd's first steamers to top the 1,000grt mark were the 1891-built *Brahmani* and *Sabarmati*, named after rivers in Orissa and Gujarat and completed by the Ailsa Shipyard in Troon for the Bombay-Mangalore service. The larger 1,190grt *Mahananda* and *Satrunji* for the Karachi service followed from the Scottish yard in 1892 and they were soon joined by the 1,590grt *Bahaduri*.

In March 1898 Shepherd, who in the meantime had been busy establishing lucrative through-cargo arrangements with the new Indian railway companies, agreed to pool earnings on the Bombay-Karachi service with the rival British India Steamship Navigation Co (BI).

The following year Shepherd was forced to retire to the UK for health reasons, having sold his share in the company to partner Hadji Ismael for 18 Lakhs, five of which were in cash. This made him a rich man and enabled him to return to India most years during the cool season before his death in Eastbourne in 1908. Hadji Ismael's brother retired three years later and Ismael himself, by now sole owner, sold the company in 1906 to Killick Nixon & Co but retained a 25% holding and a seat on the board. The fleet at that time comprised 23 ships and employed around 3,000 people. In 1907 the new 936grt *Sarasvati* arrived from the Clyde and in a surprise move the 35-year old, 1,241grt *Courland* was purchased, having failed to elicit interest from local ship breakers. This veteran, originally built for the Leith, Hamburg & Hull Co (Currie Line) but chartered by Donald Currie for his new South African service that would eventually become the Union Castle Line, provided stalwart service and was not finally broken up in Bombay until 1926.

In 1909, the Company received a new flagship in the shape of the 1,536grt *Netravati* from the Greenock & Grangemouth Dockyard Co. Though outpaced by British India's 16-knot

established herself as a favourite ship on the direct Bombay-Karachi run and somewhat pretentiously sported a golden gamecock on the peak of her foremast in emulation of that carried by P&O's crack mail steamer *Salsette*. A 1910 advertisement in the Sindh Gazette showed the



Bhadravati (1932)

direct steamers sailing from Karachi at 2.00pm every Thursday whilst the intermediate service left at the same time on Friday and called at Salaya and Narmar.

The BSN had been instrumental in setting up cadet training facilities and the 1,243grt Ailsa-built *Irrawadi*, delivered just before the outbreak of WW1, carried a number of deck cadets. During the last two years of the conflict *Indravati*, *Mahanadi*, *Sarasvati* and *Satrunji* were taken up by the Royal Navy for patrol duties south of Karachi and off the coast of Burma. On 23 June 1916 *Sabarmati* went to the rescue of passengers from the P&O liner *Mongolia* which had been targeted by a mine off Bombay. No losses were incurred during hostilities but in 1919 *Sarasvati* was disabled during a cyclone in the Gulf of Cambay. Her captain ordered part of her cargo to be jettisoned and the chief engineer managed to repair her engine, enabling her to safely make Bombay despite flooded holds and just three feet of freeboard.

It was not until 1927 that the Company began to receive new tonnage for its Karachi service. First was the 1,542grt *Parvati* from Grangemouth Dockyard. A handsome steamer with a tall

funnel, she was quickly followed in 1928/1929 by the 1,185grt sisters *Kalavati* and *Dayavati* from Bow McLachlan, Paisley. Finally the 1,449grt *Bhadravati*, a larger version of the previous pair, was completed by Harland & Wolff's Govan yard in 1932.

The last ship built for the Karachi service before WW2 came from Harland & Wolff's Belfast yard in 1936. The 1,663grt *Sonavati* followed the same basic design pattern as her predecessors but differed in being a motorship with squat funnel and cruiser stern, the latter a feature introduced three years earlier in the Harland-built sisters *Chandravati* and *Prabhavati* for the Goa mail service. It was on this southern service that the



Kalavati (1929) as a WWII Patrol Ship

BSN had successfully fended off desultory competition from the Indian Co-operative Navigation and Trading Co but in 1936 it met with a stiffer rival in the Ratnagar Steam Navigation Co set up by local textile magnate Sheth Mafatlal Gagalbhai. BSN's response to the new company's twin-funnelled passenger steamer *Ratnagiri* was the 16-knot Harland-built *Dipavati* which proved to be the faster ship but a rate war ensued which resulted in the expanding Scindia Steamship Company, which had already absorbed the Indian Co-operative N & T Co, acquiring the struggling Ratnagar concern in 1938. Scindia then proceeded to acquire all BSN's shares and took over its management in December 1939.

During the war, many of the BSN's ships were taken up by the Royal Indian Navy for patrol

duties, principally in the Perim/Gulf of Aden area. On 30 April 1941 *Parvati* was following the minesweeper HMS *Ceres* off Assab when an Italian acoustic mine exploded under her, sinking her in a minute and a half with the loss of one warrant officer and 15 ratings.

The year 1948 witnessed the delivery by Harland & Wolff's Belfast yard of the final ships for the Bombay-Karachi service. Resurrecting earlier names, the 3,750grt *Sarasvati* and *Sabarmati* were the largest and fastest passenger ships to fly the BSN flag, their 16.25 knots being provided by a single Parsons geared turbine developing 5,700shp. With their two squat red and black funnels, tall superstructure and boats mounted in gravity davits, they resembled miniature passenger liners and *Sarasvati* initially sported a pale grey hull with red band but soon reverted to the black hull with white band that her sister carried from the outset. Passenger accommodation comprised cabins for 16 in first and 24 in second classes, each class having a separate dining saloon, whilst up to 1,013 deck passengers could be carried during the fair weather season.

Scindia re-organised its coastal services in 1953 and formed a new subsidiary company, the Bombay S N Company (1953) (Private) Ltd to run its Konkan coastal and Bombay harbour service ferries. The Karachi service ships were transferred to Scindia ownership, adopting its funnel colours of black with a yellow band but in a nice touch *Sarasvati* and her sister were given lavender-coloured topsides with a narrow red band. They ran alternately from Bombay to Kutch Mandvi and Karachi every Saturday but on the return journey voyaged southwards from Bombay to Cochin on Thursday, calling at Mangalore and other Malabar ports.

During the next decade the rapid growth of internal air services and greatly improved road and rail connections made it increasingly difficult for the two ships to pay their way. They also

became involved in local conflicts, *Sabarmati* being fired on from a Portuguese battery on *Anjadip* Island near Karwar in November 1961, injuring her chief engineer and increasing a tense situation which shortly afterwards led to India's annexation of Goa. On the outbreak of the Indo-Pakistan War in September 1965 *Sarasvati* was impounded in Karachi, thus bringing to an end the long-established service. She was not returned to her owners until October the following year.

In their later years the old BSN sisters had become increasingly run down and in his essay 'Step Across This Line' celebrated author Salman Rushdie refers somewhat critically to childhood passages made in them, describing them as old rust-buckets. "The journey was hot and slow, and for mysterious reasons the boats would always stop for hours off the coast of the Rann of Kutch, while unexplained cargoes were ferried on and off: smugglers' goods, I imagined eagerly, gold, or precious stones. (I was too innocent to think of drugs.)" In the words of another writer "they were like little tubs, we all got seasick".

After 1966 the two sisters concentrated on the Bombay-Cochin route but by 1968 only *Sarasvati* was operating a weekly Saturday schedule to Mormugao, Karwar, Malpe, Mangalore and Calicut. The Cochin call had been dropped following the instigation of a direct air service from Bombay. *Sabarmati* was sold for breaking to Bombay's Ship Scrap Traders in July 1969 and her sister followed to Indian Metal Traders two months later. As a postscript, British India maintained a Karachi link until closed by *Dwarka* in 1982.

Lord Ambrose Greenway has been a member of the House of Lords for over 40 years and is currently joint chairman of the All-Party Parliamentary Ports & Maritime Group. He has written several books on shipping history. His father was born in Mumbai, hence his interest in local shipping.

Sometimes There is No Solution

By Michael W Carr

He looked in through the C-130's rear cargo doors. He could see all the way up to the cockpit landing, and just stared as he and his dive buddy bobbed in the large ocean swells. Looking below he saw the immense depths of the ocean, everywhere the endless ocean. But in front of him was this massive C-130 aircraft, bobbing in the large ocean swells. Inside the aircraft he could see a tangle of webbing, lines, and debris.

“Shit,” he said to himself as he sucked air through his SCUBA regulator. He looked over at his buddy, who looked back at him. He was in charge of this rescue, and so he knew his buddy would follow his lead.

“The Coast Guard does not do body recovery,” he remembered. But that had not stopped or prevented them from recovering bodies previously.

“Yea, we don't do body recovery, but if we don't, who will?” he often said. It's easy to make policy and doctrinal statements when you sit in an office, but the real world is different. You do what you have to do, or what you know you should do, not always what someone dreamed up or put in an instruction.

Large 8-12 foot swells, generated by gale force winds swept over the floating aircraft. At a depth of 20 feet the divers were being raised up and down, making it difficult to get a good view into the aircraft's belly. They were about 50 feet away from the C-130's tail, which cast a shadow over them.

“I really don't want that tail coming down on us,” he thought. They swam down deeper, to around 40 feet where they could look up at the aircraft. They kept looking, but no solutions for entering and recovering the flight crew came into his

mind. They swam around to the nose of the aircraft, but could not see inside. Each time they attempted to get close a large swell would raise up the aircraft or them, preventing a good straight view inside.

Before the C-130 ditched yesterday her crew had dumped all the cargo and fuel, so the plane was floating because of the air inside the empty fuel tanks. How long it would continue to float was a mystery.

“We want you to go out and see if you can get inside the aircraft and recover the bodies from the flight deck,” were his orders. Over the past day a fierce November winter gale had passed over this stretch of ocean, making entry into the C-130 dubious.

“What if we swim inside through the open ramp, and then get caught in all the webbing and debris, and then the plane decides to sink,” he thought. “I am not even sure we can swim inside without being smashed up.”

As he and his buddy swam around the aircraft, sucking air from their twin SCUBA tanks, he knew he had to make a decision. Do we try to enter the plane or not? And if we can get inside and up to the flight deck, how are we going to pull 4, or maybe 5 bodies out?

It would be easy to just say, “Nope, can't do this,” but you cannot just say no because a situation looks difficult or makes you feel really uncomfortable.

“Is there a realistic, viable option,” he said to himself. It's difficult to think rationally and logically when you are bouncing in the ocean, 180 miles from land, in post gale conditions.

C-130s crew as they ditched. He had flown many missions on Coast Guard C-130s and it was disconcerting seeing one floating in the ocean. Just not right. After making a circle around the aircraft, looking at her from the surface and from 40 feet below, and thinking about every conceivable option he came to the conclusion they could just not go inside.

“What if we get inside and the damn plane starts to sink. If we had lift bags on her, and if the seas were calm, then maybe, but this is a mess. There is no plan B if we get caught inside the plane,” he conjectured.

“We can't do this,” he finally said to himself. After bobbing in the swells for a few more minutes, he signaled his buddy NO GO, and gave thumbs up to surface. On the surface a Coast

Guard helicopter recovered them, and once inside the helicopter he was patched through to the Coast Guard Rescue Coordination Center.

“We can't get inside the plane, it's too rough, and there is too much debris inside,” he said. He felt relieved, but personally disappointed. He wanted mission success, and a solution. But today there was no solution. Their helicopter headed back to Air Station Elizabeth City NC, and a few hours later the C-130 sank, taking her flight crew with her.

*Michael W Carr
is a retired US Coast Guard officer.
Courtesy: gCaptain.com*



C-130 ditching

25 Years of IMF - A Brief History

By Capt AC Dixit

"It is not boastful to celebrate your achievements, it is necessary". We shall remember these wise words as we gear up to celebrate the 25th anniversary of the founding of the IMF and allow ourselves a moment to bask in the satisfaction of a job well done. We are also conscious of the fact that crossing this milestone is not the end of the journey but just a brief pause to retrospect, make a course correction if necessary and move ahead with renewed vigour.

Let us take a look at what the IMF has achieved since its inception in 1993.

The Early Years.

The Founding of the IMF and its 25-year long journey makes a fascinating story and who better to tell the story than the Founder/President himself?

In the course of a quiet chat with Cmde Rajan Vir, I asked him how the idea of starting an organization like the IMF occurred to him. He said the seed of the idea was sown in his mind while sailing in merchant ships in the Shipping Corporation of India, after having served in the Indian Navy for 29 years.

"I felt that the two services knew very little about each other. The naval officers had a superior attitude towards their merchant navy counterparts and to my surprise I found that the merchant navy had equally condescending feelings about the Navy. I felt it was necessary to bring the two services together and help them to develop mutual understanding and respect".

After his retirement from the sea service Cmde Vir settled down in Pune. Sometime in 1993 he met Capt Reggie Gulati, whom he had known in Indian Navy, at the Boat Club and shared his thoughts with him.

Capt Gulati who was from the first batch of JSW (Joint Services Wing) and had exposure to both the Indian Navy and the Merchant Navy, immediately agreed and the two got down to working out the basic details. The yet to be born organization was named 'The Indian Maritime Foundation'. The minutes of this historic first meeting were recorded and are still preserved in the IMF archives.

Cmde Vir then spoke to his friend in the Merchant Navy, Capt Bobby Honawar, who liked the idea and immediately joined the group, soon followed by Capt Ravi Hajarnavis and then Capt Sujit Choudhuri and Chief Engineer Surinder Aggarwal. The members of the newly formed IMF Council began to meet once a week at the Boat Club until Cmde Vir made his flat in Gera Gardens available to the IMF. Thanks to the initiative and efforts of the late Mrs Gita Vir, Cmde Rajan Vir's wife, the flat which was in an incomplete state then, was made ready in a very short time. IMF now had an office, a meeting place and an Officer Manager — Mr D'mello.

About this time the idea of publishing a journal was discussed in a council meeting and was wholeheartedly accepted. The journal was to be named 'SeaGull' with Capt Reggie Gulati as the editor.

An important policy issue had to be dealt with at this stage. Should the council members be paid for the services they were rendering? After all, they were devoting their time, money and efforts for the IMF. Should they not be compensated in some way? The unanimous verdict was a firm 'No'. It had to be purely voluntary work along similar lines as the Rotarians.



Release of First Seagull 1995

(L to R) Capt. G. J. Dhurandhar, Cmde R. Vir, R Adm M.K. Heble

Two distinguished persons joined the IMF about this time. They were Maj Gen Harry Kapoor and Mr Hasan Tyabji from Alibag. In 1994 IMF was registered with the Charity Commissioner under Bombay Public Trust Act. The Charity Commissioner, quite understandably, was incredulous to see a maritime organization applying for registration in a land-locked Pune and thought it was some sort of a joke. IMF also registered with the Income Tax Department and was granted exemption initially for 3 years at a time, which was extended in 2012 to perpetuity. Cmde Rajan Vir made several trips to the UK during this period and made many useful contacts there. Among them were- Anthony Harvey, Secretary of the British Maritime Foundation and Julian Parker- Secretary of the Nautical Institute. These contacts helped in shaping the future course of the IMF.

By now the first issue of SeaGull was getting ready. Among other features, it included an interview with Capt P Radhakrishnan, CMD of the Shipping Corporation of India. The first issue was released in 1995 in the presence of the oldest Indian Navy Officer, RAdm MK Heble and the oldest Merchant Navy officer residing in Pune, Capt GJ Dhurandhar.

Until now the IMF's objectives had been rather vaguely stated. Therefore, a new

Mission Statement was prepared which aimed to 'rekindle maritime consciousness and pride, especially among the children and the youth of India'. In order to achieve the objective of raising awareness of the oceans, lectures in schools by Council members were started. Subsequently, the ambit was extended to lectures at Pune University for post-graduate students in the Department of Defence and Strategic Studies.

The first formal lecture by a distinguished guest was held in 1995 at the Boat Club. VAdm MP Awati was invited to be the first guest speaker. The response was overwhelming. IMF set a new trend on this occasion by inviting ladies to IMF's programmes and went on to including them in all IMF activities. The tradition has continued and today IMF can boast of having five ladies as its Council Members holding important posts in the organization.

No organization can function without money. Funds were needed to launch Sea Gull. An acquaintance of Cmde Vir, Mr Chari, a retired Income Tax Commissioner, came to the rescue. He introduced Cmde Vir to Mr Naresh Kotak of JM Baxi Pvt Ltd in Mumbai. After hearing about the proposed journal of the IMF, Mr Kotak sanctioned Rs 3 lakh and gave advertisements for four issues. This was just the kick-start that was needed. IMF will forever be grateful to Mr Chari for his timely help. Cmde Vir refers to Mr Chari as one of the ANGELS who came to the aid of IMF in times of need. IMF was blessed by many such angels in the years to come.

Seafarers Memorial (1998) and Seamen's War Memorial (2008). Inspired by the memorials he had seen in the US cities and 3 towns, Cmde Vir felt that Pune should have a memorial dedicated to Seafarers. With the support of Clover Builders and after getting permission from various authorities the Seafarers Memorial, with a prominent anchor of INS Kistna, was erected opposite the Circuit House.



Chief of Naval Staff,
Adm Sushil Kumar at Seafarers' Memorial

The Memorial was inaugurated in 1998 by VAdm Arun Prakash, then Commandant of NDA, in the presence of Capt Sudheer Naphade, Nautical Advisor to the Govt of India.

The second memorial — The Seamen's War Memorial, was constructed at Bund Garden (Mahatma Gandhi Udyan) by Pune Municipal Corporation at the behest of IMF. The beautiful black obelisk designed by Architect Shirish Mohile, a Rotarian and a friend of IMF, and located in a public garden where people can easily see it, is dedicated to the 7955 Indian seamen who sacrificed their lives at sea due to enemy action in World Wars I and II. It was not easy to get a government body to sponsor such a project but with a lot of patience and some gentle arm twisting Cmde Vir had his way.

The Memorial was inaugurated by the Mayor of Pune Mrs Rajlaxmi Bhosale on 02 October 2008 in the presence of the late Mr Peter Wyn James, a

friend of IMF, who represented the British Merchant Marine along with two officers who had specially come to India for this occasion.

Sea Cadet Corp (1999). In the footsteps of Mr Rabi Ahuja who set up the Sea Cadet Corp in Mumbai at TS Jawahar, Cmde Vir wanted to start a SCC branch in Pune. After overcoming the initial hurdles The Sea Cadet Corp in Pune was launched with Cdr Kishor Patankar, a Council Member of IMF, as the Commanding Officer. Cmde Loveji Mehta, Director of JN Petit High School made his school ground available to the Sea Cadets for parades. The SCC Pune received an enthusiastic response from school-age boys and girls. The Sea Cadet Corp continues to do well under Lt Cdr (SCC) Joshua Aston.

As the new millennium dawned, things began to move at a brisk pace at the IMF. In 2001 the first



Seamen's War Memorial- Pune

seminar was held at the National Film Archives Hall in Pune, bringing together for the first time speakers from the Indian Navy and the Merchant Navy.

Also in 2001, IMF began to get involved in the marine environment issues. For this Mr Tyabji has to be thanked as he drew the attention of Cmde Vir to the rampant pollution of Alibag beaches. In course of time, protection of the marine environment became one of the focused areas of IMF.

2002. Participation in the International Coastal Cleanup. Cmde Vir met Dr David Guggenheim, an eminent marine scientist, conservationist and the Vice President of Ocean Conservancy, a Washington DC based non-profit organization devoted to the preservation of oceans. Dr Guggenheim mentioned the glaring omission of India in the list of countries participating in the coastal cleanup. Something stirred in Cmde Rajan Vir and he declared without any hesitation, "WE will do it". Back in India, realizing the enormity of the challenge he had taken up, Cmde Vir sought the help of VAdm Arun Prakash who was then FOC in C Western Naval Command. He succeeded in convincing the Admiral why the Navy's participation was necessary for this venture. The result was spectacular. The Western Naval Command went all out to support the event. On 23 Sep 2002 cleanup was organized at Mumbai's Chowpatty in the presence of VAdm Arun Prakash. The Mumbai cleanup was a big success and soon the naval stations at Goa, Kochi and Vizag also



River Bank Clean up in Punjab

followed suit. When the results from world over were compiled in Washington DC, India stood third after USA and Canada in terms of the total number of volunteers and the quantity of trash collected.

RLSS (Rashtriya Life Saving Society) 1998. Absence of a life saving organization in India was a glaring omission that had to be corrected. Cmde Vir met Mr John Long, Commonwealth Secretary General of Life Saving Society (RLSS) in London and discussed how this could be done in India. A meeting was arranged at the Turf Club in Pune with Mr John Long, an MOU was signed and Rashtriya Life Saving Society was born with RAdm PD Sharma as the President. Today RLSS India has branches in many states in India. Thousands of life savers have been trained and certified. In recognition of his achievement RAdm Sharma has been made International Vice President of the Royal Life Saving Society and has been honoured by the Queen of England.



SIMA Exhibition 2006

SIMA (Society of Indian Marine Artists) 2003. With the help of his friends in the UK, Capt Mike Barrow and Peter Wynn James, Cmde Vir invited Mr Robert King, a member of the Royal Society of Marine Artists to India in 2002, to conduct a workshop of painting seascapes on the waterfront outside the Taj Mahal Hotel in Mumbai followed by an exhibition of paintings at the JJ School of Art auditorium.

The founding of the Society of Marine Artists was announced by Cmde Vir during this event. The SIMA came into being in Pune with the active participation of Mrs Surabhi Nag, President of the Nag Foundation, with the help of Miss Sumana Nath. IMF holds an exhibition of the works by marine artists every year. In 2006 Junior SIMA was started to encourage young children to take to marine art.

Underwater Technology (2004), IMF 's interest in the field of Underwater Technology is well known. IMF convened a seminar at the Marhatta Chamber of Commerce and Industries in Pune with Mr Ian Gallett, Chief Executive of the Society for Underwater Technology, London, as the Chief Guest. IMF is planning to start a course in Underwater Technology at Pune University in the near future.

Maritime Museum & Library Setting up a Maritime Museum in Pune was a challenging task. But as always, the guiding angels came to help. Chellaram Shipping Group of Hong Kong sponsored the Museum with a generous donation. IMF member Karn Ragade helped to secure a place for the Museum at Deccan College where his grand uncle had been a Director. IMF members, some non-members and the Indian

Navy donated artifacts and books. The Museum has also become a Centre for Maritime Research. IMF gives a grant of Rs 1 lakh to anyone who wishes to write a book on a marine related subject. So far two maritime books of a high standard have been published under this programme.



Maritime Museum & Library



Tarini Crew with IMF- July 2018



Cmde R Vir addressing the audience at Indian Navy Band Concert, arranged by IMF in Pune. Oct 2003

Maritime Research Centre (MRC).

One of the objectives of IMF has been to promote research in maritime subjects. This objective has now been fulfilled thanks to the initiative of IMF Council member Dr (Cdr) Arnab Das. A doctoral degree holder from IIT Delhi, Cdr Das has been deeply involved in Underwater Domain Awareness (UDA) with special interest in acoustic habitat degradation due to noise pollution. As the Director of MRC he is now guiding a number of students in their research in UDA related subjects. MRC recently held a Summer Workshop in which students from many parts of India participated. This was followed by a seminar on Underwater Domain Awareness (UDA) at Pune University which was attended by many distinguished guests including the Union Minister of State for Defence Dr Subhash Bhamre.

Way Forward. Where do we go from here? In Cmde Vir's words, "Our main objective is to raise awareness of the oceans and protection of marine environment. We need many more organizations like ours in the hinterland of India to rekindle maritime consciousness and pride in our people. Our branches in Mumbai, Delhi and elsewhere must replicate what we are doing in Pune. Our activities like lectures in schools and colleges as well as SIMA must continue. New leadership can further expand the scope of our activities. There will be many more exciting things to come in the future".

*Capt AC Dixit
is Vice President of IMF.*

Canada's "Autonomous and Unmanned Vehicle System" Capability

By Cdr MS Randhawa (Retd)

The Royal Canadian Navy (RCN), the Canadian Army (CA), and the Royal Canadian Air Force (RCAF), are all developing the next level of Autonomous and Unmanned Vehicle System (AUVS) Capability, in line with Canada's defence policy of "Strong-Secure-Engaged," which outlines the intent to invest in a wide range of new technology capabilities for the Canadian Armed Forces (CAF), including the acquisition of a family of sophisticated and state-of-the-art Remotely Piloted Systems (RPS).

Over the last decade, the RCN has developed a robust programme for the induction of the RPS fleets. It has been using Unmanned Aerial System (UAS) ScanEagle, since many years. Recently, the maritime Situational-Awareness (SA) for the RCN took a significant step forward with the delivery of two autonomous underwater vehicles to Fleet Diving Unit (Atlantic), FDU(A), at Halifax, NS.

The REMUS 100 vehicles will be used primarily for sea floor mapping, as well as underwater surveying and searching, including near and under ice cover. They are a new capability for the RCN and were used for the first time by FDU(A) on board HMCS *Glace Bay* during Exercise Trident Juncture 18 in Norway in fall last year. In order to improve CAF's backbone system for

Intelligence, Surveillance, Target-Acquisition, and Reconnaissance (ISTAR) capability, the RCN is also working on acquiring an alternate airborne platform that can be operated from the Halifax-class frigate in order to provide near real-time ISTAR information.

The RCN ISTAR UAS will be a shipborne, complementary, persistent capability that will enhance self-defence for deployed HMC Ships, along with generating a strategically relevant tactical advantage for commanders at sea across the full spectrum of operations.

This capability will provide critical Over-the-Horizon (OTH) SA and generate a tactical advantage for commanders while minimizing the risk to the frigate or maritime helicopter in support of simple-to-multi-threat operations. As a force multiplier, too, it will provide information required to extend a commander's SA beyond the maximum range of the Harpoon Block II missile, increase interoperability with joint forces ashore, and ensure that the Halifax-class maintains a tactical advantage over potential threats.

UAS provides stealth, persistence, versatility, and affordability, while reducing the risk to human life and expensive military assets. Additionally, it permits valuable maritime



REMUS - RCN's remote eye on the sea bed

helicopter flight hours to be conserved, so as to deploy choppers for those tasks that a UAS is less suited for, such as anti-submarine warfare (ASW), application of force, medical evacuation, and personnel movements.

AUS / UAS also play a critical role by extending the reach of the communication and sensor capability over contentious or hostile areas during maritime security operations. During Canada's military intervention in Libya (Operation MOBILE, 2011), the operational requirements for sustained and continuous littoral ISR capabilities were reinforced. During Operation Artemis off Congo, Halifax-class frigates were able to interrupt terrorist-funded activities by intercepting multiple illicit narcotics shipments through cueing, detection, surveillance, and reporting from the shipborne UAS *ScanEagle*. Additionally, the UAS reduced the risk to CAF MIO maneuver elements by providing visual surveillance back to the ship during boarding operations. Ships were also able to receive early warning beyond fitted sensor ranges, of vessels of interest and foreign military warships attempting to gain information on the ship's operations.

More recently, the RCN re-affirmed its commitment to further progress its UAS programme.

In late 2017, HMCS *Winnipeg* successfully conducted a Maritime Evaluation of Class 1 Rotary Wing Unmanned Aircraft Systems – Targets (RW UAS-T) capability demonstration, at sea. The purpose of this demonstration was to identify future slow moving or stationary air targets that could be used to carry out live firing

training, experiment with new RCN Anti-air Warfare (AAW) requirements, provide force protection live scenarios, and conduct Test & Evaluation (T&E) including jamming on UAS for shipborne Electronic Warfare (EW) capability.

The RCN carried out the demonstration in co-operation with QinetiQ, the UAS manufacturer that also provides expert advisory services, technology and niche products to the aerospace, defense, civil, and security markets. The information and results obtained during the Maritime Evaluation are vital for the RCN's development of unmanned systems use at sea, and the evaluation of ships' critical defence systems.



In keeping with the Canadian Defence Policy objectives, QinetiQ Target Systems (QTS) flew multiple RW UAS-T scenarios to simulate potential warfare threats. One scenario used QTS's Snyper multi-rotor target using QTS's Universal Target Control Station (UTCS), which allowed the operation of multiple unmanned systems from a single command center. The RCN has leveraged QTS for the employment of fixed wing aerial targets and marine surface targets,

which will pave the way forward for future UAS development and employment.

As the development of RPS increases, this technology is proliferating among potential adversaries, too. This expanded proliferation, combined with technological advancement, will mean that Canada is faced with a variety of possible threats from the enemy's RPS, ranging from non-state actors using unsophisticated and commercially available systems for conducting reconnaissance, to advanced potential state adversaries developing high-end, weaponized systems.

In response, Canada will acquire the appropriate capabilities to identify and defend against these burgeoning threats. For defeating adversary's UAS at sea, *Snyper Mk II* is intended to be operated from any Canadian warship, and is designed to act as a target to test shipboard sensors and weapons as well as develop tactics against a drone threat at sea. It also has the ability to take imagery during its flight for post-mission analysis.



Shown flying is OBSIDIAN, which uses counter-drone technology, specifically designed to detect, identify and track small / micro drones.

HMCS *Winnipeg* successfully trialed the *Snyper Mk II* UAS-T with a vertical takeoff and landing demonstration in November 2017 and HMCS *Charlottetown* embarked the UAS-T in July 2018 during its deployment to the Arctic on Operation *Nanook*.

Another advancement in the RPS field is the project to develop a Remote Mine Hunting and Disposal (RMHD) System, which will be a modular, stand-off naval mine countermeasures capability, designed to provide the full spectrum of naval mine hunting operations and contribute to underwater domain awareness, without risking human life.

For the Canadian Army, the Land Equipment Project Management (LEPM)'s ISTAR team completed delivery of the CU172 'Blackjack' – a Small Unmanned Aircraft System (SUAS), thus giving the CA the capability to observe two separate objectives / scenarios, simultaneously, 24x7.

The system consists of four unmanned aircraft, three Ground Control Stations, a catapult launcher and a recovery system called the Skyhook, whose vertical cable snatches the tip of the aircraft's wing as it flies by (similar to the 'arrestor' on board an aircraft carrier). The system does not require a runway to operate.

Earlier, the team had also delivered the Raven B (Mini) and Black Hornet 3 (Micro) systems.

Cdr MS Randhawa is IMF's Correspondent in Toronto, Canada

Vice Admiral MP Awati PVSM, AVSM, Vr C (Retd.) (07 Sep 1927 – 04 Nov 2018)

An Obituary

Comde Ajay H. Chitnis (Retd.)



It is over two months since the passing away of Vice Admiral Manohar Prahlad Awati, and many obituaries have been written in Newspapers and online News portals, including a fitting Tribute in the Daily Telegraph of London. Many people close to the Admiral have also written about him in glowing terms, and many anecdotes have been recounted. So, why am I writing this now? And why for Seagull?

The Seagull is a quarterly journal, published on the 1st of February, May, August and November each year, and since the Admiral breathed his last on the 4th of November, our 95th Issue was already under dispatch, and we could not make a

mention of his passing. That answers my first question; and as for the second one, the Admiral was a revered member of the Indian Maritime Foundation since our coming into being in December 1993, which makes him a Founder-member. For us at the IMF, it is a great loss indeed, as he had promised our President, Comde Rajan Vir, that he would attend the recently held Silver Jubilee function. It was in the fitness of things, therefore that we stood in a minute's silence to pray for the departed soul at the start of our function on the 14th of January.

Born in Surat in a family of Academics, he chose a career at sea. Passing out second in his course from the Training Ship Dufferin in 1945, young Awati was offered a Commission in the Royal Indian Navy, and sent to Dartmouth for his initial training with the Royal Navy. As Lt. MP Awati, he received the President's Colours awarded to the Indian Navy, as it came to be known after independence, from India's First president Babu Rajendra Prasad.

In 1953-54 he did his specialist course in Signals and Communication in UK and was appointed as the SCO of the Flagship INS *Delhi* on return. His illustrious naval career saw him graduate from the Defence Services Staff College, Wellington, and appointments ashore as the Deputy Naval Advisor in London, Officer in Charge Signals School, Cochin and the Chief Instructor Navy, at DSSC, Wellington. At sea, he held Command of the Training Ship INS *Tir* and the Destroyer INS *Ranjit*. During the 1971 war, then Captain MP Awati was in Command of INS *Kamorta* and the Senior Officer of the 31st Patrol Vessel Squadron. His ship was in the thick of operations throughout, and he was awarded the Vir Chakra for Gallantry. His Citation read;

"Manohar Prahlad Awati was the commanding officer of an Indian naval unit of the Eastern Fleet



Celebrating Seagull's 50th issue on 9-8-2007

during the operations against Pakistan in December 1971. Throughout the period, he was called upon to operate within enemy waters where there was constant danger to his ship from enemy mines and submarines. Undeterred, he carried out continuous probes into the enemy defended harbours in Bangladesh and inflicted heavy damage on the enemy. During the blockade, he attacked and captured three enemy ships carrying contraband goods. He also gained a submarine contact and pressed home an attack with great vigour, which possibly resulted in destruction of and damage to the submarine. Throughout, Captain Awati displayed gallantry, leadership and devotion to duty of a high order. He was the Naval Officer-in-Charge Goa in 1974, when he was specially chosen to Command the Cruiser INS *Mysore*, to reinvigorate the ship after there had been an unrest on board. His outstanding leadership qualities, coupled with innate empathy and personal example ensured

that the ship regained its position of primacy in the Indian Fleet, and became a shining example of camaraderie and leadership."

After promotion to the Flag Rank, Rear Admiral MP Awati was appointed as the Commandant of the National Defence Academy (NDA), and become an idol, and an inspirational leader to a generation of Cadets, some of whom rose to become Generals, Admirals and Air Marshals. Many have written about him, and some accounts are easily available on the Net. After this he was appointed the Flag Officer Commanding the Western Fleet. On promotion to Vice Admiral he was appointed as the Chief of Personnel at Naval Headquarters, before taking over as the Flag Officer Commanding in Chief of the Western Naval Command. He retired from the Navy in 1983 at the age of 56.

I first came across the Admiral when he was the



Seminar on ISPS Code 17.3.2006

Fleet Commander and I was the Flight Commander of a Shipborne Helicopter Flight. It was a privilege flying the Admiral from ship to ship and from ship to shore and vice versa. As the Fleet Commander he ordered an outbound exercise for the ships, which entailed a large number of sailors and officers trudging up to Matheran, a hill station close to Mumbai. Much as he wanted to trek with them, time and work pressure prevented him from doing so. He asked if I could 'Chopper' him to the camp site. After studying the map and selecting a site close to the campsite, I said it could be done. Much to my surprise, he turned up at the helibase in his Riding Breeches, and we took off for Matheran. I realized the reason when we landed, a magnificent horse awaited him, and off he was after I declined to follow him on another horse. Later when he was the CinC, I was again fortunate to fly him around. Some sorties stay fresh in the mind even after almost four decades. One was a flight into the valley near INS Shivaji where the Commanding Officer had recreated the Battle of Umbre. A real tight fit it was putting the chopper down on a make shift helipad in the middle of a forest, after which he saddled up and rode down the route taken by Shivaji Maharaj during the Battle. Another time was when a Soviet Aircraft Carrier called at Mumbai. Due to Draught Constraints, the Carrier had anchored well outside the port limits, and the Admiral could only transit by helicopter. As the only

Russian speaking pilot, I was nominated to fly him. He requested me to let him occupy the co-pilot's seat for the sortie, which I agreed to (what was the choice?). The Russians were amazed with his 'flying skills'.

Even after retirement from the Navy the Admiral was an active supporter of the Maritime Fraternity. He set up the Maritime History Society, and was its Founder President, and remained the President Emeritus. An avid ecologist, he created a scrub jungle in his home village, Vinchurni. It is said that he was once offered the job of the Ranger/Conservator of the Serengeti game reserve and the Ngorongoro forests, which he declined. He is the author of three books on nature and wildlife, *Homo Sapiens* and *Panthera Leo*, The Vanishing Indian Tiger and Nature Clubs of India.

He will always be remembered as the 'Father of Ocean Sailing in India'. Awati conceptualised the "Sagar Parikrama" project launched in 2007, which entailed solo circumnavigations around the globe on Indian-built sailboats. This led to the construction of the sail training boats *INSV Mhadei* and *INSV Tarini*. In 2010, Cdr Dilip Donde of the Indian navy the first recorded solo circumnavigation by an Indian. He was followed by Cdr Abhilash Tomy, who became the first Indian, and the second Asian, to do a non-stop solo circumnavigation around the world. The Sagar Parikrama project also led to the first ever all-woman circumnavigation expedition, called the *Navika Sagar Parikrama*, which was completed in 2018 by 6 lady officers of the Indian Navy.

We at the IMF will always remember his strong support and deeply miss his active participation in all our functions. Rest in Peace Admiral!

**Cmde Ajay Chitnis
is Vice President IMF**

Scapa Flow – Graveyard of The German Fleet

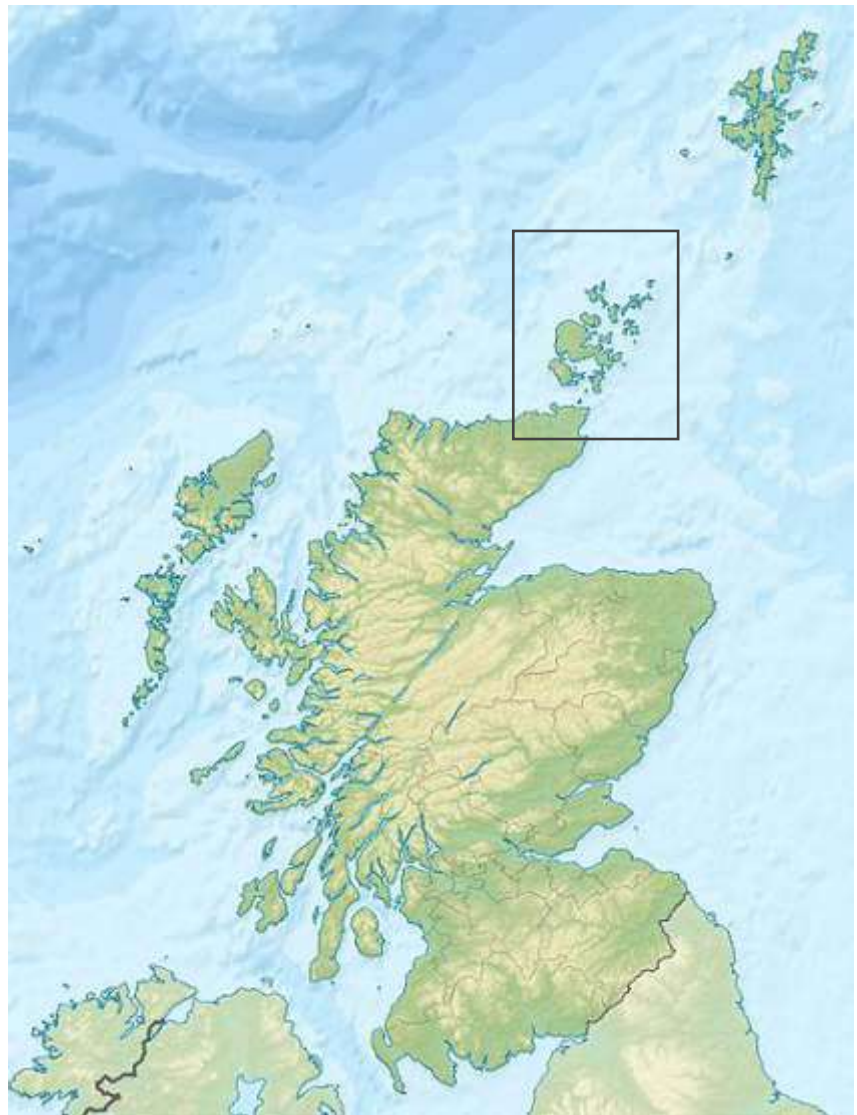
Cdr Mukund Yeolekar (Retd)

Scapa Flow, meaning 'bay of the long isthmus' is a body of water in the Orkney Islands, Scotland, sheltered by several islands. Its sheltered waters have been used by ships since prehistoric times and it has played an important role in travel, trade and conflict throughout the centuries - especially during both World Wars. Vikings anchored their long ships in Scapa Flow more than a thousand years ago, but it is best known as the site of the United Kingdom's chief naval base during World War I and World War II. The facility was closed in 1956.

Scapa Flow harbor measuring about 325 sq km, has a shallow sandy bottom with a maximum depth of 60 metres and an average depth of about 30 met and is one of the great natural harbours /anchorages of the world, with sufficient space to hold a number of fleets.

Historically, the main British naval bases were near the English Channel to counter the country's imperial rivals. In 1904 in response to the build-up of the German High Seas Fleet, Britain decided that a northern base was needed to control the entrances to the North Sea, as part of a revised policy of 'distant' rather than 'close' blockade. Scapa Flow had been used many times for British exercises in the years before the War and when the time came for the fleet to move to a northern station, it was chosen for the main base of the British Grand Fleet – unfortified.

End of World War I. In 2018 the world commemorated the centenary of the end of World War I which changed the map of West Asia and Eastern Europe. The Armistice was signed on 11 Nov 1918 in France and this ended the war. According to the terms of the Armistice, the German U-boat fleet and Surface fleet were to be handed over to the Allies. There was no possibility of return of the U-boats but the Allies

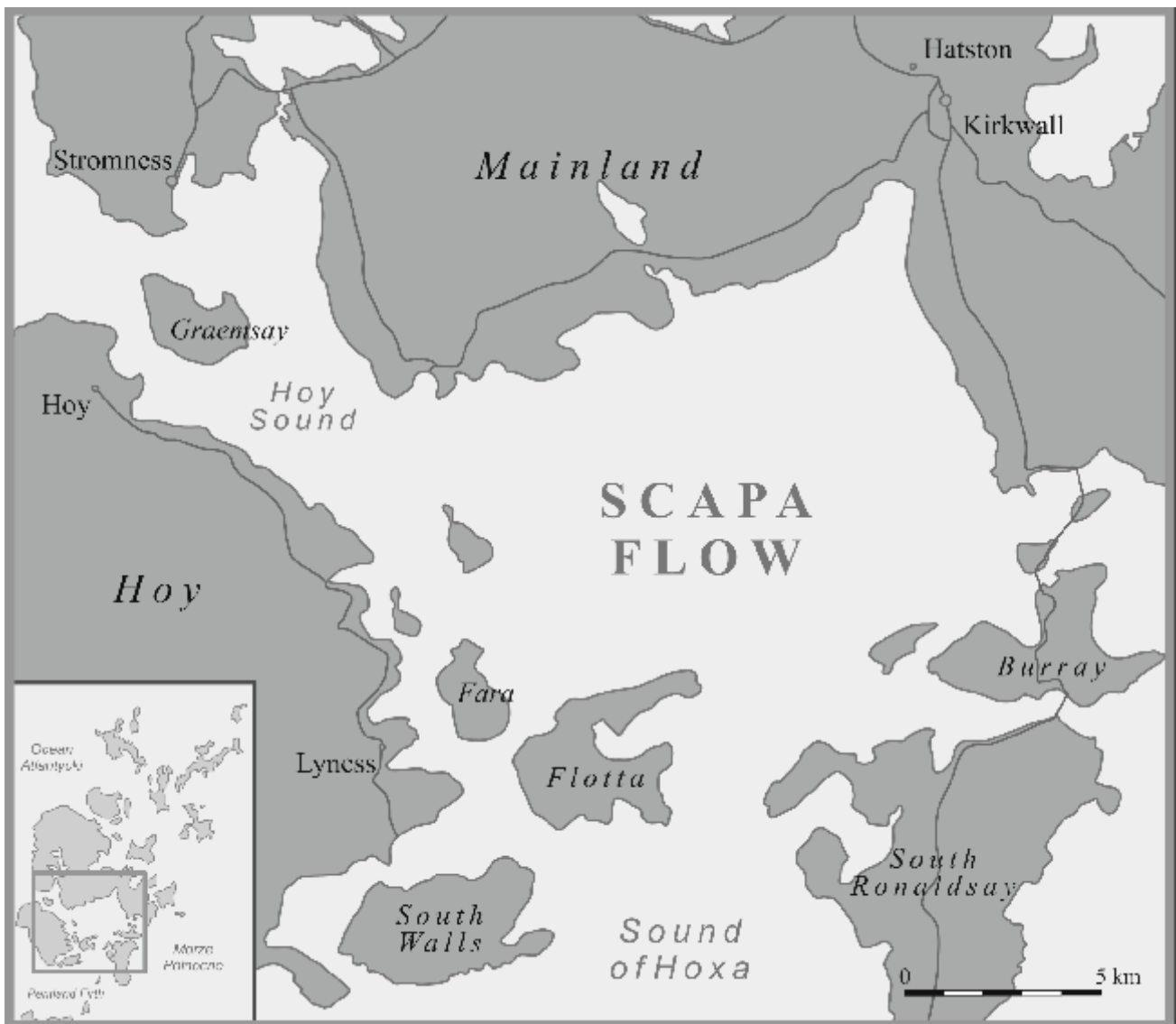


Orkney Islands, Scotland.

had not agreed upon the course of action about the Surface fleet. The British Admiral Sir David Beatty oversaw the arrival of 70 German battleships, cruisers and destroyers under the command of Rear Admiral Ludwig von Reuter on 21 Nov 1918 on the Scottish coast. The Royal Naval ships were in action stations ready for any eventuality. Beatty ordered the German ships to be anchored at Rosyth and to haul down the German flag at sunset, not to be hoisted again without permission.

Later the German fleet was moved to Scapa Flow to be interned until the peace arrangements were

settled. Four more warships arrived to make the total to 74, manned by about 20000 German seamen. Most of the crew were sent back to Germany and skeletal caretaker crews were left to man the ships. They were forbidden from going ashore or visiting other ships. Food supplies came from Germany twice a month but the officers had trouble keeping control of a mutinous and bored crew. Discussions continued at the peace conference in Paris where the French and Italians bid for some ships for themselves while the British wanted all of them to be destroyed. The Americans suggested that the ships be interned in a neutral port until a final



decision was reached, but the two countries that were approached – Norway and Spain – both refused.

The Armistice forbade the Germans from destroying their ships. The British had approved plans to seize the ships in case scuttling was attempted. Meanwhile von Reuter, suspicious of Allied intent, prepared detailed plans to scuttle his ships. He received secret orders from Germany to scuttle the ships at all costs. British Intelligence tried to prove that the scuttling had been authorised by Berlin but they never found any proof.

In the meantime the signing of the Treaty of Versailles which was dragging on was finally scheduled for noon on 21 June 1919. The First Battle Squadron prepared to board the German ships in force to check for signs that the fleet was preparing to scuttle. The British had plans to seize the German ships at mid-night of 21/22 June, after the treaty was meant to be signed. However news was received that the signing of treaty was extended to 1900 on 23 June. Therefore the additional time available was utilized for exercising the battleships against torpedo attacks and the Squadron sailed to sea on 21 June. The seizing of German ships was rescheduled to 23 June after return of the Battle Squadron to harbor.

The Fleet is scuttled. Around 10:00 a.m. on 21 June 1919, von Reuter sent a flag signal ordering the fleet to stand by for the signal to scuttle. At about 11:20 the flag signal was sent. The signal was repeated by semaphore and searchlights. Scuttling began immediately: seacocks and flood valves were opened and internal water pipes smashed. Portholes had already been loosened, watertight doors and condenser covers left open, and in some ships holes had been bored through bulkheads, all to facilitate the spread of water once scuttling began. The crews now totaling fewer than 2,000 men took to their lifeboats as the ships began to sink with tremendous hissings of steam, spouts of water and huge sucking and gurgling sounds.. The British Naval force left at

Scapa Flow was in no position to take any action. The Battle squadron exercising at sea was ordered to return to harbor and when they reached in the afternoon, only a few large ships were afloat. By evening, of the 74 German ships, 15 capital ships, five light cruisers and 32 destroyers had sunk.

Over 400,000 tons of modern warships were sunk, the largest loss of shipping in a single day in history.

The remaining ships either stayed afloat or were towed to shallow waters and beached.

The German crews which took to life boats were captured and treated as POWs. Admiral Reuter and his staff were rounded up and their actions denounced. The Royal Navy regarded the scuttling as a blessing in disguise as it disposed of the question of how to redistribute most of the ships among rival Allies while German officers felt that the ignominy of surrender to the British had been erased.

The surviving ships were later distributed among the Allied navies. The sunken ones were left on the bottom and a few of them remained there to become a focus for diving expeditions. Being dangerous to navigation, in the 1920s salvage attempts started and a British scrap-metal dealer bought two sunken battlecruisers and 26 of the destroyers from the Admiralty and began operations to refloat them. They later salvaged many sunken ships.

Thus ended the miserable saga of the once formidable WW I German Navy. It is well known that within two decades a defiant Germany under Hitler bounced back with an even more powerful Navy ready to take on the world. Rest is history.

References
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Cdr Mukund Yeolekar
is Editor of Seagull

Gallimaufry

U.S. Navy Salvage Team Completes Oil Removal from Former German Cruiser *Prinz Eugen*.

A U.S. Navy-led salvage team has successfully removed 229,000 gallons of oil from the sunken World War II vessel *Prinz Eugen* located in the Kwajalein Atoll in the Marshall Islands. The project, led by the Navy's Supervisor of Salvage and Diving (SUPSALV), which is part of the Naval Sea Systems Command, and sponsored by the U.S. Army Space and Missile Defense Command /Army Forces Strategic Command. It was led by Stephanie Bocek of SUPSALV. The success of the oil removal comes after two years of intensive research and planning to prepare for the unprecedented removal of oil from up to 173 tanks from the World War II German heavy cruiser.

MAN Liquefied Hydrogen Fuel System Awarded Preliminary Approval in Principle.

A subsidiary of MAN Energy Solutions has announced that its marine fuel-gas system for liquefied hydrogen has been granted preliminary approval in principle from classification DNV GL, marking a major step towards the first commercial use of hydrogen fuel by a commercial ship. MAN's hydrogen fuel system was developed in-house by Gothenburg-based MAN Cryo, a wholly owned subsidiary of MAN Energy Solutions, in close cooperation with Norwegian ferry operator, Fjord1, and ship designer, Multi Maritime. Both Multi Maritime's hydrogen vessel design for Fjord1 along with 'MAN Cryo – Hydrogen Fuel Gas System' were awarded the preliminary AIP.

“Winning this approval is a significant development for a number of reasons. As a solution for vessels employed on relatively short maritime routes, such as ferries, this technology is a world-first and showcases our company's ability to deliver genuinely innovative

solutions,” said Dr Uwe Lauber, CEO of MAN Energy Solutions. “Furthermore, Hydrogen is a clean fuel whose profile fits perfectly with the general desire within the industry to move towards cleaner technology. The possibilities for this technology are varied and exciting.”

British Golden Globe Yachtswoman Rescued by Cargo Ship in South Pacific.

LONDON, (Reuters) – British solo round-the-world yachtswoman Susie Goodall was rescued by a cargo ship on 07 Dec 18 a day after her boat capsized and lost its mast during a violent storm in the southern Pacific Ocean. The 29-year-old, the youngest entrant in the Golden Globe race, had waited two days for the Hong Kong-registered *Tian Fu* to arrive after sending a distress signal from 2,000 nautical miles west of Cape Horn.

The signal was picked up by Falmouth Coastguard in southwest England, with the alert passed on to race control and the Chilean maritime search and rescue authorities. On December 5th at 07: 43 the MRCC Chile received an EPIRB from yacht DHL Starlight manned by Susie Goodall from UK, after being pitched at 2,000 miles west of Cape Horn. MRCC Chile has tasked MV “*Tian Fu*” to change its original course to go to her aid. Goodall, who was in fourth place at the time of the incident, had been knocked out when the boat rolled end over end in the dismasting. The Golden Globe was marking the 50th anniversary of the race, won in 1969 by Britain's Robin Knox-Johnston who became the first person to sail solo non-stop around the world.

Courtesy: Reuters

Arctic Posts Second Warmest Year On Record in 2018 – NOAA. The Arctic had its second-hottest year on record in 2018, part of a warming trend that may be dramatically changing earth's

weather patterns, according to a report released on Tuesday by the U.S. National Oceanographic and Atmospheric Administration.

“Arctic air temperatures for the past five years have exceeded all previous records since 1900,” according to the annual NOAA study, the 2018 Arctic Report Card, which said the year was second only to 2016 in overall warmth in the region.

“Growing atmospheric warmth in the Arctic results in a sluggish and unusually wavy jet-stream that coincided with abnormal weather events,” it said, noting that the changing patterns have often brought unusually frigid temperatures to areas south of the Arctic Circle.

Environmentalists have long warned of rapid warming in the Arctic, saying it threatens imperiled species like polar bears, and is a harbinger of the broader impacts of climate change on the planet.

Courtesy: Reuters

High Bay Storage System Could 'Revolutionize' Container Handling in Ports.

An international joint-venture involving Dubai-based DP World and industrial engineering specialists SMS Group has unveiled a new intelligent container storage system that the partners say could revolutionize the way that containers are handled in ports. The system, known as the High Bay Storage system, was originally developed by SMS group subsidiary AMOVA for round the clock handling of metal coils weighing as much as 50 tons each. Now, the partners in the joint venture have adapted the technology to the port industry.

Instead of stacking containers directly on top of each other, as has been global standard practice for decades, the High Bay Storage system places each container in an individual rack compartment. In place of stacks, containers are stored in an eleven-story rack that can be as high as 50 meters, creating 200 percent more capacity than a conventional container terminal, or creating the same capacity in less than a third of the space.

Courtesy : gCaptain



High Bay Container Storage

News From Janes

(Jane's Defence Weekly)

India signs USD500-million deal to licence-build two Russian stealth frigates.

India's Ministry of Defence (MoD) has signed a USD500-million deal with Russia to licence-build two Admiral Grigorovich (Project 11356M)-class stealth frigates for the Indian Navy (IN) at the state-owned Goa Shipyard Limited (GSL). Indian officials told Jane's on 20 November that the inter-governmental agreement signed with Russian export agency Rosoboronexport entails the transfer of technology to GSL to build the two 124.8 m-long vessels.

GSL Managing Director Rear Admiral Shekhar Mittal (ret'd) was quoted by the Press Trust of India as saying that construction of the warships is scheduled to begin in 2020, with the first platform expected to be delivered in 2026, followed by the second a year later.

Iran announces launch of two more Ghadir midget Subs. London-30Nov 2018. Two Ghadir-class midget submarines were launched during a ceremony at Bandar Abbas naval base on 29 November, Iranian media has reported. The ceremony was attended by Rear Admiral Hossein



A Ghadir-class submarine is seen at the Bandar Abbas base where the midget boats are manufactured and serviced. (defapress.ir)

Khanzadi, the commander of the Islamic Republic of Iran Navy (IRIN). These Ghadirs are the first IRIN has claimed to have launched since two in November 2012. Before then, at least 16 were reported to have been launched.

New frigate joins Iranian navy. London - 05 Dec2018. The frigate *Sahand* officially joined the Islamic Republic of Iran Navy (IRIN) during a ceremony held at the main naval base at Bandar Abbas on 1 December, more than five years after it was ostensibly launched. Classified as a destroyer by the IRIN, the vessel is the third of the navy's Mowj derivatives of the Alvand-class light frigates that were built in the UK for Iran in the 1960s. *Sahand* has the same name and number (74) as the original Alvand-class vessel sunk by the US Navy in 1988.

The two frigates previously produced under the Mowj project were *Jamaran* and *Damavand*, the latter of which sank in the Caspian Sea early this year after it grounded on the breakwater outside Bandar Anzali. A fourth vessel is under construction in Bandar Abbas and will be called *Dena*, according to IRIN Commander Rear Admiral Hossein Khanzadi.

The new *Sahand*'s superstructure has been redesigned to reduce its radar signature. Rear Admiral Ali Qolamzadeh, director of the IRIN's Self-Sufficiency Jihad, told the Fars news agency that this has increased its radar-evading capability by 30%. He also said that the capabilities of its weapons, electronic warfare systems, and its endurance are at least double those of *Jamaran*.

Carrier USS John C Stennis establishes temporary Sri Lanka air logistics hub.

The US Navy (USN) *Nimitz*-class aircraft carrier *USS John C Stennis* (CVN 74) has established a

temporary air logistics hub in Sri Lanka to receive support, supplies, and services at sea. The hub includes an airstrip and storage facilities to provide logistics support to USN ships operating in the Indian Ocean. It also has the potential to provide expeditionary logistics support during humanitarian and disaster relief missions. Such logistical hubs are becoming increasingly necessary for USN operations in the Indo-Pacific regions as the service executes its plan to deploy more forces in the region, naval experts noted.

China launches seventh Type 071 LPD

Singapore - 31 Dec 2018. China's Hudong-Zhonghua shipyard has launched the seventh Yuzhao-class (Type 071) landing platform dock (LPD) vessel on order for the People's Liberation Army Navy (PLAN).

The LPD took to the water on 28 December, as derived from information in a notice to mariners released by Shanghai's Maritime Safety Administration (MSA) agency.

The Type 071 LPD has an overall length of 210 m, an overall beam of 28 m, and a hull draught of 8 m. The platform has a top speed of 25 kt and can accommodate a crew complement of 156 including 23 officers.

Malaysia, Singapore reach agreement to de-escalate maritime, airspace tensions Singapore - 08 Jan 2019. Leaders from Malaysia and Singapore have agreed on temporary measures to defuse recent disputes over airspace and maritime territory that have threatened to escalate in recent weeks.

The measures were agreed upon at a bilateral meeting that took place between the foreign ministers of both countries on 8 January in Singapore. Measures that will be taken include an immediate suspension of the restricted airspace enacted by Putrajaya in December 2018 over the southern Malaysian state of Johor, and the

establishment of a working group of senior officials to examine the dispute over port limits in western Singapore.

Malaysia and Singapore, both of which have had decades-long disagreement over airspace and maritime territories, found themselves embroiled in the latest round of disputes after Putrajaya unilaterally announced an alteration to its port limits in the Johor Strait on 25 October 2018 to include waters that Singapore claims as part of its territory. These waters are located approximately 1n mile off the coast of Tuas in western Singapore, and 5.3 n miles off Tanjung Piai in southern Malaysia.

Tensions began to escalate on 3 December 2018 when Malaysia's Marine Department dispatched an 85 m buoy tender, MV Polaris , into the disputed waters, presumably to demarcate Putrajaya's newly declared port limits.

UK Royal Navy to deploy Type 23 frigate to Japan. London - 11 Jan 2019. The UK Royal Navy will deploy Type 23 frigate HMS Montrose to Japan in early 2019, Prime Minister Theresa May announced during a joint press conference with Japanese Prime Minister Shinzo Abe held on 10 January in London.

The warship will be dispatched to Northeast Asia to help enforce sanctions against Pyongyang "as part of our joint determination to a peaceful resolution to tension in the region and the complete de-nuclearisation of North Korea", said May.

The deployment announcement comes after UK naval vessels were dispatched to the region three times over the past 12 months.

Compiled by Cdr Mukund Yeolekar

World Within a World

by Deepak Rikhye

The Sundarbans are under threat due to rising sea levels and global climate change



Wetlands are virtually the fusion of terrestrial and maritime features and bring forth vegetation, with forests, often bordering a coastline. Channels of freshwater from tributaries influence the ecology and the water eventually empties into the sea. Since wetlands are also near the sea, the level of salinity in the water will impact both the flora and fauna of the region.

World Wetlands Day is observed on February 2nd, each year. It has been established to raise awareness about the value of wetlands for humanity and the planet. They act as buffers on coastlines against storms and cyclones.

The theme for Wetlands Day in 2018 was - Wetlands for a Sustainable Urban Future.

The theme in 1999 was - People and Wetlands - The Vital Link. Wetlands in India account for 4.7% of the total geographical area of the country. These wetlands provide numerous ecosystem features but unfortunately happen to be under stress, due to urbanization and pollution, which has been contributing to their loss. Conservation of wetlands requires a regulatory framework in India. To view a particular wetlands feature we may focus our

sights on the Sundarban mangrove forests, with channels of water flowing along and even viewing a Bengal Tiger, perfectly at home, wading across a rivulet. The scenario is evocative of Charles Darwin's words during his epic visit to Galapagos, when he described the islands as "a world within a world."

The Sundarbans cover one million hectares in the deltas of the rivers Ganges, Brahmaputra and Meghna and is shared 60%, by Bangladesh, and 40% by India; it is the world's largest coastal wetland system. The area experiences a subtropical monsoonal climate, in addition to severe cyclonic storms.

Large amounts of sediments carried by rivers contribute to its dynamics. The dominant mangrove species is *Heritiera fomes*, locally known as sundari. The trees have a thick canopy and the undergrowth is covered by mangrove seedlings. Levels of salinity change over a range of temporal, or earthly, scales. The biodiversity includes some 350 species of vascular plants, which have tissues that conduct water of flowering plants or ferns.

There are 250 varieties of fish and 300 different birds. In addition are mollusks and reptiles, including the King Cobra, which is highly endangered and other mammals. Along with the Bengal Tiger which is also highly endangered, are the hog deer and barking deer suspected to be extinct in this habitat.

Over the past two centuries a large area of the Sundarban mangroves have been converted into paddy fields and more recently shrimp farms are being established and the region has been exploited for timber, prawns and fodder. The biodiversity of mangroves has been in focus because their ecosystems are being threatened by global climate change particularly due to rising

sea levels.

More than 40% of the world's mangroves occur in South and Southeast Asia. Pollution has impacted the catchment of the Ganges and Brahmaputra rivers due to synthetic fertilizers and use of pesticides in adjoining areas of cultivation, which has created a serious threat to these wetlands, with aquatic vegetation and fauna being directly affected.

Industrialization particularly in the Haldia Industrial Complex and on the western side of the Hoogly river add to the pollution, which in turn, will gradually contribute to the degradation of the Sundarban mangroves, as pollutants move downstream.

To exacerbate this issue there have been incidents of oil spills with one example being the Panamanian cargo ship, in 1994, near Dangmari which affected 15 square kilometers including a considerable area of Sundarban's mangrove forests. Hussain and Acharya reported in their notes, during a visit, that certain types of grasses, fish and aquatic mammals perished, since the oil forms a suffocating type of cover over the surface of water.

After independence India declared the Lothian Island, of 3,800 hectares, a Wildlife Sanctuary and later a much larger area comprising the Sajnakhali Wildlife Sanctuary. Project Tiger established a Tiger Reserve in Sundarban covering 2,585 square kilometers, in 1973. This was followed by another sanctuary, on Haliday Island, of about 600 hectares. The estuarine crocodile and the

olive ridley turtle are receiving attention by way of captive breeding.

No narrative on the Sundarban mangrove forests will be complete without narrating the local's relentless search for honey, which translates a clash between man and nature, where inevitably, nature appears to be the loser. Local fisherman move from island to island for weeks in their precarious boats, collecting honey from some of the largest and most aggressive bees in the world. After collecting the honey, some fishermen, light fires inside the hives to melt any remnants of honey and thus burn the larvae; as a shortcut to reach hives placed on top of a tree, they axe the tree down.

Climate change will disturb the rainfall pattern too and as the vegetation continues to suffer, so will the wildlife, because the pyramid of life, all creatures depend on, will be disrupted. The authorities in-charge must not permit this region, already recognized by Unesco, to disappear from India's list of precious legacies.

*Deepak Rikhye
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Influence Of Geopolitics on International Law

By Ms Minoo Daryanani

It is well-established that laws regulate human behavior and with time in response to sociological changes and advances in technology which impact on human behavior, new laws are framed. Cyber, media, aviation, environmental laws are good examples of contemporary trends in human civilization finding reflection in the statute book of nations. Similarly, "freedom of navigation" is an archetypical example of geopolitics shaping international law. Advances in seafaring prowess that determined the geopolitics and power-balance of each era of history later gave rise to the concept of "freedom of navigation", which then evolved over centuries to become embedded in international law as a rule of conduct between coastal states and maritime powers.

As far back as 30 BC to 117 AD, when the Roman Empire held sway over the Mediterranean Sea by controlling most of its coasts, the Romans began to refer to the Mediterranean Sea as *Mare Nostrum* (Latin for "our sea"). Maritime republics like the Republic of Genoa and the Republic of Venice declared a "*Mare Clausum*" policy in the Mediterranean. Later the Nordic kingdoms and England required permission be taken for sea passage, exercised monopoly on fishing and blocked foreign ships in their neighboring seas.

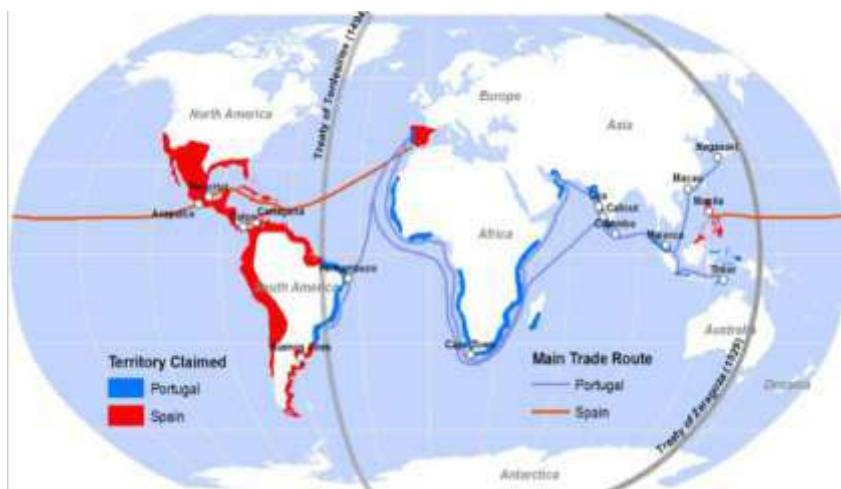
Mare Clausum in the Age of Discovery. During the Age of Discovery, between the 15th and 17th century, sailing that had been mostly coastal became oceanic. Thus, the main focus was on long-haul routes. Countries of the Iberian Peninsula were pioneers in this trend towards long voyages of discovery, seeking exclusive ownership and exploration rights over lands discovered and waiting

to be discovered.

Given the extent of new lands awaiting discovery and colonization, the resulting influx and potential of enormous wealth became the driving-force for voyages of discovery. The kingdom of Portugal and the united kingdoms of Castile and Aragon began to compete intensely for the discovery and control of more land in the New World. To avoid war and recurring hostilities, they resorted to diplomacy, marked by the signing of the Treaty of Alcáçovas in 1479 and the Treaty of Tordesillas in 1494.

Pope Nicholas V by the *Bull Romanus Pontifex of 1455* had prohibited others to navigate the seas which were under exclusive Portuguese control without permission from the King of Portugal. The very title of the Portuguese king proclaimed their superpower status : "**King of Portugal and the Algarves, within and beyond the sea in Africa, Lord of Commerce, Conquest and Shipping of Arabia, Persia and India**".

Without doubt the papacy helped legitimize and strengthen the extravagant claims of Spain and Portugal. The **Treaty of Tordesillas** (1494), signed between Portugal and Spain both acting as



Geopolitics- age of exploration and Treaty of Tordesillas

domini, facilitated by fifteenth century papal largesse, divided the world into two. Based on the famous fourth papal Bull of Alexander VI, the Treaty split the Atlantic approximately midway between the Azores and the West Indies along a meridian 370 leagues west of the Cape Verde Islands.

Criticized as a display of sovereignty ad absurdum, the Treaty nevertheless significantly altered history: new-found territory and peoples west and south of the meridian became property of the Castilian Crown (essentially most of the Americas); territory to the East—Brazil, Africa, the Indian Ocean to Bombay, Goa and the Spice Islands leading to the Moluccas—fell into the realm of the Portuguese king. The most telling consequence of carving the world, (repeated in the twentieth century during the Cold War between the USA and the Soviet Union signified by the "Iron Curtain", dividing eastern and western Europe), epitomized super-power willingness to appropriate and divide that which could not be seized outright.¹

This policy of carving ocean-space and the world into two exclusive dominions was challenged by other European nations like France, Holland and England who were barred from engaging in sea discovery or conquests, effectively an embargo on their sea-trade. In the 16th and 17th century Spain considered the Pacific Ocean *Mare Clausum* – a sea closed to other naval powers. As the only known entrance to the Atlantic, the Strait of Magellan was patrolled by Spanish fleets to prevent the entry of non-Spanish ships. On the western end of the Pacific Ocean, the Dutch threatened the Spanish Philippines.

¹ Although not explicitly stated in 1494, historian Charles Gibson noted “the assumption commonly made in Spain... was that the Tordesillas line should be projected around the world into the Asiatic hemisphere.” This may be understood in terms of Portuguese control over the Spice Islands, of tremendous commercial value in European trade.

Mare Clausum versus Mare Liberum. In February 1603 the seizing of the 1500-ton loaded Portuguese *Santa Catarina* by the Dutch East India Company led to a public judicial hearing and a campaign to sway public (and international) opinion. The representatives of the Dutch East India Company then called upon Hugo Grotius, a jurist of the Dutch Republic, to draft a defence of the seizure.

Hugo Grotius sought to ground his defense of the seizure of the Portuguese *Santa Catarina* in terms of natural justice. Grotius formulated a new principle that the sea was international territory and all nations were free to use it for seafaring trade. One chapter of his long theory-laden treatise entitled **De Jure Praedae** (1609) was circulated in the form of the influential seminal pamphlet, *Mare Liberum* (The Free Sea).



Geopolitics - Hugo Grotius statue

Reaction followed. In 1625, Portuguese priest Serafim de Freitas published the book **De Iusto Imperio Lusitanorum Asiatico** (Of the just Portuguese Asian Empire) addressing step by step the arguments of the Dutch jurist. However, the rise of several maritime powers had transformed the power-balance, challenged the naval superiority of both Spain and Portugal and demanded an end to the *Mare Clausum* policy. It became clear that freedom of the seas was an essential pre-condition for the development of maritime trade.

England, competing fiercely with the Dutch for domination of world trade, opposed Grotius' ideas and claimed sovereignty over the waters around the British Isles. In *Mare Clausum* John Selden endeavored to prove that the sea was as much capable of appropriation as terrestrial territory.

As conflicting claims snowballed, as a compromise, maritime states agreed on the principle that sovereignty over the oceans had to extend seawards from their land territory. A workable formula "the cannon-ball rule" was propounded by Cornelius Bynkershoek in his *De Dominio Maris* (1702), restricting maritime dominion to the actual distance within which the range of the cannon-ball could effectively protect it. This became universally adopted and developed into the three-mile limit. The 1982 UNCLOS adopting this formula, increased and extended territorial sovereignty to the twelve nautical miles limit of the nation's territorial waters.

Maritime historians understandably view China's recent efforts to enhance sovereign rights over the South China Sea by building structures on submerged banks and reefs with a sense of *deja vu*.² Indeed such outrageous malfeasance is no different from the geo-strategies adopted historically by maritime powers to carve out areas of sea-space where only their writ would prevail. China constructed upon otherwise uninhabitable coral projections barely above the high tide mark (causing substantial, even permanent environmental damage)³ in order to claim entitlement to maritime zones greater than twelve nautical miles, which are accorded to "rocks"

under Article 121(3) of 1982 UNCLOS. China's creation of seven man-made islands in the South China Sea, deployment of surface-to-air missiles and anti-ship cruise missiles, construction of airfields, installation of advanced surveillance and early warning radars allow China's military to control virtually the entire South China Sea.

Global warming has made possible the opening up of Arctic shipping routes linking the Atlantic and Pacific Oceans. The *Northern Sea Route*, part of the Northeast Passage within Russian waters and another route is across the nineteen thousand islands of the Canadian Archipelagic island chain known as the *Northwest Passage*. Here again Russia and Canada claim sovereignty over these respective passageways, holding them to be enclosed waters, subject only to Russian and Canadian sovereignty respectively. Proximity to chokepoints, control over icebreaking escort services and the remoteness of the regions enhance their effective control over these sea-passageways.

Once again the preemptory norm of freedom of navigation, the quintessential bulwark for maritime trade and commerce, is being challenged and steadily undermined by geopolitics and the geostrategies of nations. What remains to be seen is whether this hallmark of the comity of nations shall withstand such onslaughts or lose its status as a preemptory norm of customary international law that was adopted and accorded sanctity by the 1982 UNCLOS.

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² The Permanent Court of Arbitration at The Hague ruled on July 11 2016 that China has no historic title over the waters of the SCS and that it has breached the Philippines' sovereign rights with its actions, infuriating Beijing which dismissed the case as a farce. The case, brought by the Philippines in 2013, hinged on the legal status of reefs, rocks and artificial islands in the Scarborough Shoal and Spratly Island group.

³ South China Sea Arbitration (Award), 1203 finding China has caused irreparable harm and permanent destruction to coral reef ecosystems and natural conditions concluding the spatial extent and duration of the construction of artificial islands, including dredging, removal of geomorphological coral structures (bommies), has damaged up to sixty percent of the shallow waters.

Some New Titles On British India

A Review by Paul Ridgway FRGS, FRIN

Not unlike London buses, when there are few to be seen then two come along at once. As it is with books from London this quarter with titles on Britain's time in India, these are well presented topics and I provide outlines below.

But first let me preface these short reviews with a little background which will enable readers to appreciate the fact that the British people are well aware that the influence of India is reflected in their life style.

Tea apart, we now have a national dish created by families who came to GB post-war from India and Pakistan. On my way across the City of London I cannot avoid crossing India Street and passing by the end of Rangoon Street (both streets were the site of East Indian Company warehouses) barely six cables west of places where families from the sub-continent settled.

The first large group of Muslims in Britain arrived more than 300 years ago when sailors

recruited in India to work for the East India Company. Several phases saw immigration to Britain followed the opening of the Suez Canal in 1869. And the 1950s saw significant numbers from the subcontinent arrive in the UK, prompted mainly by post-War labour shortages.

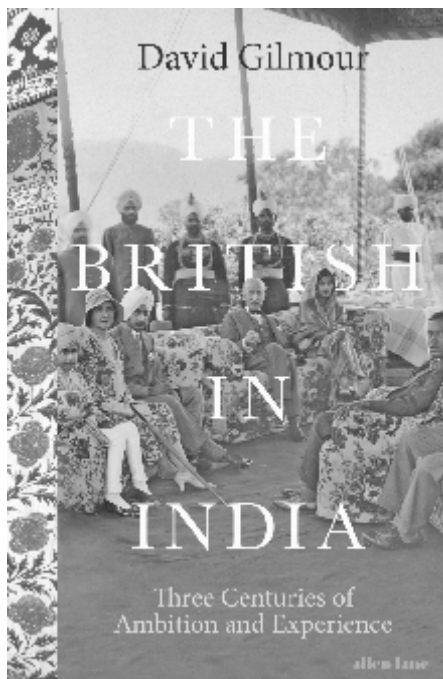
At this time of commemoration of the end of the First World War we must never lose sight of the contribution made by India for she had 1.5 million men in uniform serving from Europe to Africa, Asia and the Indian Ocean.

And so it was in late September I gathered my notes after reading these books and turned out what you read below in a favourite billet near the rear ranks of the Old India Office Library now part of the British Library in the Euston Road, otherwise known as The Asia, Pacific and Africa Collections. Here I was seated beneath portraits of Indian princes and overlooked by the grand heraldic charms of the HEIC and with a view of three fine ships, 19th century builders' models: the twin-screw troopship *Hardinge*; the monitor *Abyssinia* built for the defence of Bombay in 1854 and *Minto*, constructed in 1895 by Laird Brothers of Birkenhead for the Government of India.

The British in India: Three centuries of Ambition and Experience
By David Gilmour.

Here is a panoramic social history, tracing the lives of countless individuals in India and the world they created. Gilmour's efforts are marked by new archival research and some images not before seen

The British in this book lived in India from shortly after the reign of Elizabeth I (1600) until well into the reign of Elizabeth II. They were soldiers, officials, businessmen, doctors and missionaries, men and women, planters,



British in India

engineers and many others, together with children, wives and sisters.

This book describes their lives, their work and their extraordinarily varied interactions with the Indian people; it also records the very diverse roles they played in the three centuries of British-Indian history and underwrites the fact that India is very much still part of British consciousness.

There are no fewer than 40 references to John Company, the HEIC, with others to P&O and related marine tasks undertaken by various outfits in Indian waters. All supported by a strong index, a glossary of Indian and Anglo-Indian words with chapter notes and a valuable list of sources and further reading.

Gilmour writes of people who have been little

written about before: men and women who are presented here with humanity and often with humour. The result is a magnificent tapestry of life, an exceptional work delivering a scholarly chronicle which reads like a great 19th century novel. It makes a highly original and engaging contribution to a long and important period of British and Indian history.

David Gilmour is one of Britain's most admired and accomplished historical writers and biographers. He is a Fellow of the Royal Society of Literature and a former Research Fellow of St Antony's College, Oxford.

Published by Alan Lane, an imprint of Penguin Books.

ISBN 978 0 241 00452 4; 618 pages. Price £30.00.

Book on Queen Victoria and India By Miles Taylor

Now for an entirely original account of Victoria's relationship with the Raj, which shows how India was central to the Victorian monarchy from as early as 1837. In this engaging and controversial book, Miles Taylor shows how both Victoria and Albert were spellbound by India, and argues that the Queen was humanely, intelligently, and passionately involved with the country throughout her reign and not just in the final decades.

Taylor also reveals the way in which Victoria's influence as empress contributed significantly to India's modernization, both political and economic. This is, in a number of respects, a fresh account of Imperial Rule in India, suggesting that it was one of Victoria's successes. There are more than 60 page references to the East India Company and the book is supported by valuable chapter notes running to 60 further pages outlining sources for further study with a helpful bibliography with origins by country indicating where documents are to be found.

Miles Taylor is professor of modern history at the University of York. Between 2008 and 2014 he was director of the Institute of Historical Research.

When the reading and writing became too much I dipped into Thacker's Bengal Directory (later Thacker's Indian Directory) published in from 1864 to 1960 and available on the British Library's shelves. This almanac listed British and foreign merchants and manufacturers, shippers, agents and industries, Army, railway and government departments and office holders, European and non-European residents. A veritable vade mecum of who did what and where in India across two centuries.

Oh and I am never without my *Hobson-Jobson*.

Published by Yale University Press. ISBN 978 0 300 11809 4; 388 pages. Price £25.00.

Paul Ridgway is IMF's Correspondent in London.

Letter from London

By Paul Ridgway FRGS FRIN

HMS Queen Elizabeth arrives home

HMS Queen Elizabeth, sailed back into Portsmouth on 10 December after successful completion of initial fast jet trials in America, marking a new era in UK Carrier Strike capability.

The 65,000-tonne carrier's first transatlantic deployment, which began in August, saw her embark two F-35B Lightning II test aircraft, from the Integrated Test Force (ITF) based out of Naval Air Station Patuxent River, Maryland. She also conducted a historic, week-long visit to New York.

During the development trials, the jets conducted 202 take-offs from the ship's ski ramp, 187 vertical landings, and 15 shipborne rolling vertical landings (SRVL) —a landing technique unique to the UK. They also dropped 54 inert bombs, testing the weight loading in a variety of weather and sea states. The operating envelopes

will be further expanded during operational trials, scheduled for next year, it has been reported.

Defence Secretary Gavin Williamson commented: '*HMS Queen Elizabeth's inaugural deployment to the US has not only marked the return of the Royal Navy's carrier strike capabilities, but also strengthened our special relationship with US forces. A true statement of our global reach and power, this ship will serve the United Kingdom for generations to come, keeping the nation safe and supporting our allies as we navigate increasing threats.*'

The WESTLANT 18 Task Group comprised *HMS Queen Elizabeth*, *HMS Monmouth*, RFA *Tidespring* and aircraft from 820, 845 and 814 Naval Air Squadrons, as well as Royal Marines from 42 Commando and supporting units from



QE arrives Home

the US Navy and US Marine Corps.

It is understood that *Queen Elizabeth* will remain in Portsmouth during the early part of 2019 undergoing maintenance.

The IMO MSC...

On 7 December IMO's Maritime Safety Committee (MSC) completed its landmark 100th session with progress on a number of topics. These included: (i) the regulatory scoping exercise on maritime autonomous surface ships; (ii) approval of revised guidelines on fatigue and further updates on work on goal-based standards, (iii) polar shipping and (iv) safety issues relating to low-sulphur fuel.

In a special session with invited speakers future technologies and the continued role of the seafarer were discussed. A new IMO safety video was launched, highlighting the wide spectrum of work the MSC has undertaken over 60 years to enhance safety and security at sea, including aspects of navigation, cargoes, ship construction, seafarer training, search and rescue and communications, to name a few examples.

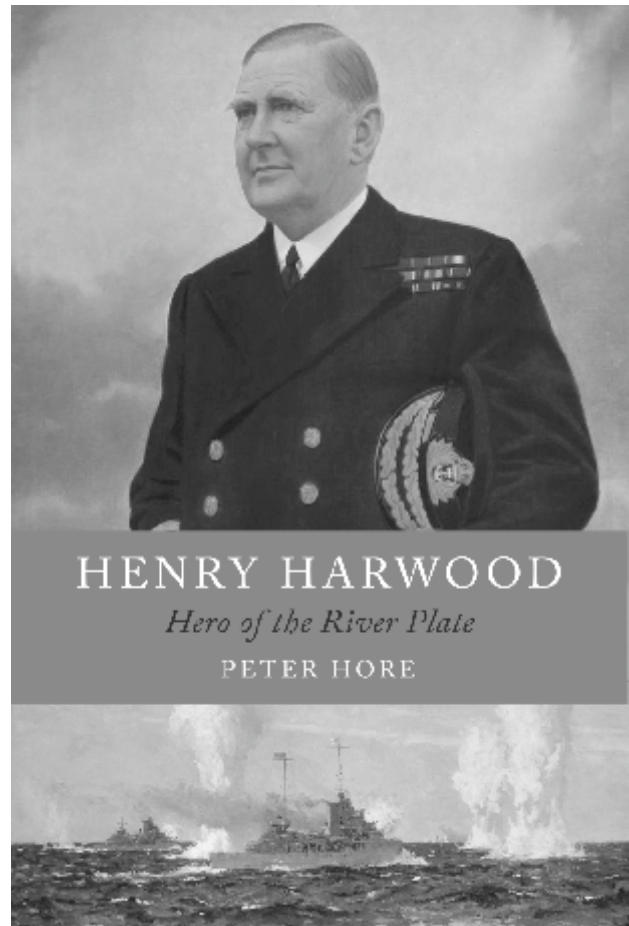
...and a Royal visit

HRH The Princess Royal visited IMO HQ on 5 December. She was received by Secretary-General Kitack Lim, addressed the MSC and took a keen interest in the proceedings. HRH, who is Master of Trinity House and President of the Mission to Seafarers, met delegates from a number of Member States and non-governmental organizations. This visit was organised as part of a series of events commemorating IMO's 70th anniversary and the World Maritime Day theme – IMO 70: Our Heritage: Better Shipping for a Better Future. On 6 March this year, 70 years to the day since the IMO was established, HM the Queen visited IMO HQ.

Henry Harwood, Hero of the River Plate.

That is the title of a new book by Captain Peter Hore and issued by Seaforth Publishing / Pen & Sword of Barnsley, S Yorkshire. ([www.pen-and-](http://www.pen-and-sword.co.uk)

www.pen-and-sword.co.uk ISBN 978 1 5267 2529 5. It is also available in EPUB and Kindle editions), 244 pages, price £25.00. The foreword is by Admiral Sir Jock Slater, First Sea Lord and Chief of the Naval Staff from 1995 to 1998.



Henry Harwood (1888-1950) is best known for his destruction of the *Admiral Graf Spee* at the Battle of the River Plate in December 1939 about which Winston Churchill, then First Lord of the Admiralty, said: '*This brilliant sea fight takes its place in our naval annals and in a long, cold, dark winter it warmed the cockles of the British hearts*'.

Admiral Sir Henry Harwood's wider naval career was remarkable and epitomised the Royal Navy in the first half of the 20th century. He became a

naval cadet in 1903, specialised as a torpedo officer in 1911, and for his services in the First World War was appointed OBE in 1919. He was one of the Navy's intellectuals, it has been said, gaining first class passes in all his examinations and, during his interwar service on the South American station, learning Spanish.

During his service in important staff appointments and at the Imperial Defence College, he made a particular study of international relations and, in the light of perceived failings at sea in the First World War, of tactics and command. He was thus well-qualified when in 1936 he became Commodore-in-Command of the South American division of the America and West Indies Station, and well prepared to meet and defeat the German pocket battleship *Admiral Graf Spee* with his inferior force of cruisers in 1939.

He was promoted Assistant Chief of Naval Staff at the Admiralty, and, in 1942, appointed Commander-in-Chief, Mediterranean, in succession to Sir Andrew Cunningham.

Then, commanding a fleet too enfeebled for its tasks, he found General Montgomery plotting against him and Churchill losing confidence in him before being relieved of his command. Invalided out of the Navy in 1945, he was

wrongly blamed by some for the Navy's perceived failings in the Mediterranean.

Peter Hore has been given exclusive and unique access to the Harwood family archives and, in the light of these previously unpublished papers, has set about rehabilitating the character, career and achievements of this great British admiral.

This is not only a fine biography but it gives valuable insight into respect for Britain in South America (where it had huge investments) before the Second World War. Hore also sets out some of the complex structure encountered in tri-service command in the Middle East in 1940-1943 with particular regard to the political and strategic aspects of the effort to drive the Axis forces out of North Africa and, of course, there was inter-service rivalry and the Staffs in London with which he had to contend. Ill health, most likely stress-related, followed then retirement.

No fewer than 15 pages of sources are provided indicating considerable depth of research by the author who provides six further pages of bibliography for additional reading.

*Mr. Paul Ridgway
is IMF's correspondent in London*

Answers to Maritime Crossword

Across :

1. Boom, 3. Bilges, 7. Founder, 8. Compass, 9. Clipper, 10. Galley, 13. Radar,
14. Bearing, 16. Fluke, 17. Foremast, 19. Forepeak, 22. Foremast, 24. Deadlight, 25. Quarterdeck

Down :

1. Board, 2. Flotsam, 4. Block, 5. Derrick, 6. Bosun, 8. Captain, 11. Capstan, 12. Wardroom, 14. Belay,
15. Telegraph, 18. Crow'snest, 19. Fore, 20. Con, 21. Bridge

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