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Chandigarh: TBRL starts construction of boundary wall to restrict movement of wild animals

By Saurabh Prashar

Restricting the entry of wild animals from the side of the Khol-Hi-Raitan wildlife sanctuary into the area of Terminal Ballistic Research Laboratory (TBRL), TBRL authorities started constructing a 2.500km long boundary wall going on different slopes of Morni Hills. The construction work began last week and is expected to be complete in a month.

The Haryana Forest and Wildlife department had earlier raised strong objection challenging the jurisdiction of TBRL, which works under the Defence Research and Development Organisation (DRDO), but had later agreed. The move attracted sharp criticism from wildlife enthusiasts, who termed the decision to be anti-wild animals. They warned that it will increase human-animal conflicts at the side of some villages including Barewala, Nadda and others.



Sudhir Chaudhary, a wildlife enthusiast based in Panchkula, said, “Barewala village is located under the foothill on which a boundary wall is being constructed. Wild creatures including leopard, sambhars, monitor lizards etc usually move from one hill slope to another. But as the movement of these animals will be restricted by a long boundary wall topping concertina wires, these creatures will turn towards the nearby areas. There should be some mechanism to address the demand of boundary wall. The wall is being constructed immediately next to the wildlife sanctuary.”

A wildlife check post is located nearby the construction site. TBRL spreads in more than one thousand hectares of areas and a majority of its area consists thick forest and is covered with dense bushes. Prior to 2016, construction within an area of ten km from the wildlife sanctuary was prohibited, but was later reduced to zero km in Haryana.

“Legally we cannot challenge the construction because the land belongs to TBRL-DRDO. We had raised an objection to the reduction in radius in which construction cannot be done citing the exact map and jurisdiction. The TBRL officials produced the map and agreed to spare two-three meter place for making a pathway towards the wildlife sanctuary for the inspection. TBRL is a sensitive area. The authorities are making boundary walls all around it,” said Shiv Singh Rawat, Divisional Wildlife Officer (DWFO), Panchkula.

An incident of the death of a leopardess after being tangled in the barbed wires on the side of TBRL was reported in September, 2016.

<https://indianexpress.com/article/cities/chandigarh/chandigarh-panchkula-tbtl-wild-animals-6316375/>

Hindustan Aeronautics' operational turnover to cross Rs 20,000 cr in FY20

HAL is also poised to scale another summit this year, with its operational turnover for 2019-20 on track to exceed Rs 20,000 crore - for the first time ever

By Ajai Shukla

New Delhi: Hindustan Aeronautics (HAL) on Monday announced the payment of interim dividend of Rs 33.25 per share, entailing a payout of around Rs 1,000 crore, mainly to the government.

HAL is also poised to scale another summit this year, with its operational turnover for 2019-20 on track to exceed Rs 20,000 crore — for the first time ever.

However, HAL has to take a bank loan to pay its interim dividend. That is because its finances are deep in the red because of huge dues from the Indian Air Force (IAF), by far HAL's biggest customer.

Business Standard learns the IAF's dues, which are for aircraft and services already delivered, is likely to be around Rs 17,000 crore — only a little less than its entire year's turnover.

Contacted for comments, the IAF did not respond. However, senior air force officials, speaking on condition of anonymity, argued that the dues to HAL are not more than Rs 13,600 crore. Furthermore, according to the IAF planners, it is the defence and finance ministries that are holding up payments to HAL.

This unpaid bill reflects a rising trend that is evident in HAL's annual reports. In 2016-17, the IAF's dues to HAL amounted to Rs 3,995 crore; in 2017-18 it rose to Rs 6,751 crore; in 2018-19 it more than doubled to Rs 13,939 crore; and is likely to rise this year by another Rs 3,000 crore.

With HAL lacking money for day-to-day production, design and development, and even to pay salaries of employees, the once cash-rich defence public sector undertaking (DPSU) has had to turn to the banks for loans. HAL's past two annual reports paint a picture of financial decline. Bank balances dropped from Rs 8,345 crore in 2016-17 to Rs 6,433 in 2017-18 to Rs 101 crore last year. This year, it will be in negative.

Meanwhile, borrowings have steadily risen. HAL's annual reports reflect borrowings of Rs 950 crore in 2016-17, which dipped slightly to Rs 764 crore the next year, before zooming to Rs 4,058 crore in 2018-19. This year, HAL is learnt to have already borrowed over Rs 8,000 crore and this is on course to rise by another Rs 1,500 crore for running expenses and dividend payouts.

It is unclear why the IAF has not been clearing its dues to HAL, even while making payments on schedule to foreign vendors such as Dassault. Every financial year since 2017-18, the IAF has been allocated the lion's share of the military's capital Budget: a 40 per cent share in 2017-18 (Rs 34,917 crore); 40.5 per cent in 2018-19 (Rs 36,481 crore); 42.5 per cent in the current year (Rs 44,869 crore).

For the coming year, the IAF has again been allocated 40.5 per cent of the services capital allocation, amounting to Rs 43,282 crore.

| IN THE RED | | | | |
|---------------------------|---------|---------|---------|-----------|
| (₹ crore) | | | | |
| | 2016-17 | 2017-18 | 2018-19 | 2019-20* |
| Revenue from operations | 18,554 | 18,624 | 19,894 | 20,500 |
| Payments due (mostly IAF) | 3,995 | 6,751 | 13,939 | 17,000 |
| Bank balances | 8,345 | 6,433 | 101 | Negative |
| Borrowings | 950 | 764 | 4,058 | 9,500 |
| Cost of finance | 10 | 28 | 170 | Not known |

*Estimations for year ending March 31, 2020
Source: HAL annual reports

The firm's annual report for 2018-19 takes note of the dues, but states in its "Significant Accounting Policies" that: "Debts from Government departments are generally treated as fully recoverable and hence the firm does not recognise credit risk of such financial assets. Impairment on account of expected credit loss is being assessed on a case to case basis in respect of dues for a significant period of time."

Even if the IAF's debts are fully recoverable, there are significant financial penalties that HAL is paying as a result of its disrupted cash flows. Prior to 2015, HAL's hefty cash reserves generated income for the company. Today, its balance sheet reflects a growing "cost of finance": Rs 10 crore in 2016-17, Rs 28 crore in 2017-18, Rs 170 crore in 2018-19 and, apparently, an even larger figure in the current financial year.

It is unclear what HAL's board is doing to deal with this problem. A decade ago, the DPSU would have encountered no enquiries, since it was wholly government-owned. Now, however, with disinvestment having placed shareholding partially in public hands, the board is responsible for protecting the financial interests of public shareholders. HAL has not responded to queries from Business Standard.

https://www.business-standard.com/article/companies/hindustan-aeronautics-operational-turnover-to-cross-rs-20-000-cr-in-fy20-120031700046_1.html



Tue, 17 March 2020

Defence Ministry spent Rs 26.12cr in 2019-20 on legal matters

New Delhi: India's armed forces spent Rs 26.12 crore in legal expenses in the financial year 2019-20 up to February 2020, Defence Minister Rajnath Singh said in Parliament on Monday.

"A total of Rs 26,12,30,810 has been spent for legal expenses by Army, Navy and Air Force for the year 2019-20 (up to February, 2020)," Singh said in the Rajya Sabha, replying to the query of a member of the House. Elaborating, the minister said that the legal expenses include payment of fee, remuneration, professional charges to advocates, law firms, arbitrators, conference, conveyance charges, clerkage, retainer fee, expenses incurred by the government counsel on drafting of Special Leave Petition/Counter Affidavit/Rejoinder, drawing up written submissions, drafting or appearance, preparation of suites, writ petitions and appeals.

"Payment of fee to counsel for various cases is only a part of the legal expenditure," Singh said.

Fee bills of government counsels appearing in cases filed by or against the Army, Navy and Air Force in the Supreme Court, Delhi High Court and Lower Courts in Delhi jurisdiction are being paid through the Ministry of Law and Justice.

When the member A. Mohammedjan (AIADMK) asked whether it is also a fact that the government has been undertaking excessive litigation, the defence minister replied "no".

He said appeals are filed before the appellate courts, Supreme Court against the impugned judgments of the lower courts only after case to case examination in detail, and subsequent to obtaining the opinion of Legal Advisor (Defence) and Law Officers that is Solicitor General of India, Additional Solicitor General of India.

(Disclaimer: This story has not been edited by Outlook staff and is auto-generated from news agency feeds. Source: IANS)

<https://www.outlookindia.com/newscroll/defence-ministry-spent-rs-2612cr-in-201920-on-legal-matters/1762858>

SC ruling on permanent commission of women officers in Navy today

A permanent commission entitles an officer to serve in the Navy till he/she retires unlike short service commission (SSC), which is currently for 10 years and can be extended by four more years, or a total of 14 years

The Supreme Court (SC) will give its verdict on Tuesday on grant of permanent commission for serving women officers in Indian Navy.

A permanent commission entitles an officer to serve in the Navy till he/she retires unlike short service commission (SSC), which is currently for 10 years and can be extended by four more years, or a total of 14 years.

The judgment will be delivered by a bench of justices DY Chandrachud and Ajay Rastogi.

The case pertains to appeals filed by the Union government against a September 2015 judgment of Delhi high court (HC) holding that there was no convincing reason to exclude serving women officers from consideration for permanent commission.

The Centre had decided in September 2008 to grant permanent commission to women officers but the same was applicable only prospectively to women SSC officers. The serving women officers were excluded from this entitlement. The HC had held that exclusion of serving women officers from permanent commission was irrational and arbitrary. The court cited women officers who had retired during the pendency of the case before they could be reinstated.

The SC had in February this year, in a similar issue relating to the Indian Army, struck a blow for gender parity holding that SSC women officers in service are entitled to permanent commission. Such women officers -- the apex court held on February 17 -- have to be considered for permanent commission, irrespective of them having exceeded 14 years of service. The proposal by the Central government in this regard to restrict PC to SSC women officers with less than 14 years of service was rejected by the SC.

<https://www.hindustantimes.com/india-news/sc-ruling-on-permanent-commission-of-women-officers-in-navy-today/story-ClqKFuKbIxuL2skL90JvCN.html>



Tue, 17 March 2020

Navantia pitching S80 plus submarine for India's P-75I during UDS 2020

The Cartagena shipyard Engineering Director, Germán Romero Valiente, made a presentation of the characteristics and capacities of the Spanish S80 Plus submarine, which is a unique product in the international market for its size and capacity, thanks to its AIP system.

This edition of UDS has had a record participation with attendees and lecturers from 36 countries, and in this occasion Navantia has been able to report on progress of the S80 Plus submarine program, both from the constructive point of view, as of a robust design that makes it suitable for export.

Currently, the first submarine in the series has passed the hull closure milestone and is scheduled to be floated at the end of this year 2020, tested during 2021, and delivered to the Spanish Navy in 2022.

The AIP (Air Independent Propulsion) system has been developed specifically for the project by the Spanish company Abengoa (bioethanol reformer) and the American Collins Aerospace (fuel cells). The AIP system is much more versatile and efficient than others on the market. Among other advantages, it uses an agricultural bio-ethanol, available internationally, fuel cell membranes require half the maintenance of the market standard, and its efficiency allows it to operate for periods of up to 3 weeks underwater.

The S-80 Plus submarine is a last generation highly technological product, whose versatility allows the export. Currently Navantia is offering a design derived from this submarine to the Indian Navy, for the P75(I) program, for design and construction of 6 units.

As well, Navantia was also invited to a panel of experts where future trends in rescue and underwater rescue were discussed.

About India's P-75I

The Indian government shortlisted in January 2020 two Indian shipyards and five foreign defense companies for the P-75I project which calls for the local construction of six conventional submarines.

The two local shipyards that were shortlisted are the privately owned L&T group and state-owned MDL. The five foreign defense companies are:

Daewoo Shipbuilding and Marine Engineering DSME (South Korea)

Navantia (Spain)

Naval Group (France)

Rubin Design Bureau (Russia)

ThyssenKrupp Marine Systems TKMS (Germany)

About S80 Plus:

The S80 class (or Isaac Peral class) are AIP (air independent propulsion) submarines currently under construction for the Spanish Navy. Four boats have been ordered, all are under construction by Navantia at its yard in Cartagena. Construction of the submarines had been suspended in early 2013, when it was found that the first submarine in the series, the Isaac Peral, was 75 to 100 tons too heavy relative to its length.

General Dynamics Electric Boat was brought in by Navantia through a Foreign Military Sale in 2013 to tackle the weight distribution issues. Each submarine has been stretched with a 10 meters ring to better distribute the weight of the submarine, giving them the new "S80 Plus" or "S80 Flight II" designation. The intended delivery date of the first submarine is December 2022.

The AIP System is based on a fuel cell, which uses hydrogen produced through bioethanol and oxygen processing to generate electricity, allowing the submarine to sail for weeks without surfacing. The first submarine that will have this operating system will be the S83, "Cosme García". The AIP system will be installed in July 2021. The submarines S81 and S82, currently under construction, will be upgraded with the AIP module in their first scheduled major overhaul period.

<https://www.defencenews.in/article/Navantia-Pitching-S80-Plus-Submarine-For-India%e2%80%99s-P-75I-During-UDS-2020-809757>

India, Japan developing hypersonic missiles to counter looming Chinese threats

After the US and Russia first began developing hypersonic missiles, China too jumped on the bandwagon and the latest to enter this race are Japan and India. Experts, however, suggest that hypersonic missiles can have a severe impact on the global security with India and Japan also looking to acquire the technology.

Hypersonic Weapons Technology

Hypersonic weapons refer to weapons that can travel at a speed faster than Mach 5 or in other words systems that can travel five times the speed of sound. The reasons why hypersonic weapons are considered deadly is because they comprise the capacities of both, the ballistic as well as cruise missile wherein they have the speed of a ballistic missile and the manoeuvrability of a cruise missile.

Hypersonic weapons are specifically designed to counter the modern ballistic missile defence system and to deliver conventional and nuclear payload at high velocities over long ranges.

Hypersonic vehicles typically consist of a Supersonic Combustion Ramjet, or Scramjet propulsion system to enable such high speeds. A Scramjet engine is an engine that uses “air-breathing” technology, which means that the engine collects oxygen from the atmosphere as it is travelling and mixes the oxygen with its hydrogen fuel, creating the combustion needed for hypersonic travel.

This is different than a traditional ramjet, which is used on space shuttles and satellite launches. The traditional ramjet engine carries liquid oxygen, and hydrogen together, adding a tremendous amount of weight to the vessel.

Most of the added weight comes from the liquid oxygen (the oxidizer), which is nearly 70% of the fuel used in space launches. For a scramjet to work the air travelling into the engine must already be at supersonic speed.

This is so the air is properly condensed to the required density to effectively combust with the hydrogen mix. To reach supersonic speed, the vessel is usually launched with a traditional booster engine, and once it has reached the proper speed and altitude (generally around Mach 5 and 100,000ft) the scramjet is activated.

Other options currently in development are dual-mode ramjet (DMRJ), which works as a ramjet until the craft reaches proper speed and altitude, and then begins to work as a scramjet. By using the DMRJ, the vessel can operate without a booster, which allows it to operate in a more clandestine manner.

Hypersonic Missiles The US, Russia and China

The United States, Russia and China have been involved in the development of a hypersonic weapons system. The US in 2011 launched successfully an Advanced Hypersonic Weapon that successfully struck a target located at 3700 km away.

US defence major Lockheed Martin, as reported by the EurAsian Times, is developing a hypersonic vehicle called as Falcon Hypersonic Technology Vehicle 2 which is a manoeuvrable rocket launched aircraft that glides through the earth’s atmosphere at Mach 20.

China also has been developing a Hypersonic Glide Vehicle (HGV) and Hypersonic Cruise Missiles. DF-ZF is a hypersonic glide vehicle and can reach speeds of up to Mach 10. It is expected to be operational by 2020. The Chinese Military has been developing DF-17 a ballistic missile combined

with an HGV. The missile has the capacity to travel at Mach 10 and reach targets between 1100 to 1500 miles.

Russia is the first to deploy HGV known as Avangard which is capable of sharp high-speed manoeuvres in flight and can reach a speed of Mach 20. As a part of a joint venture with India, Russia has also been working on its BrahMos, a Hypersonic Cruise Missile reaching a speed of Mach 7. Another hypersonic cruise missile Russia is building is KH-47M2 Kinzhal that can travel at Mach 10 with a distance of 1200 miles.

Hypersonic Missiles – Japan & India

While the Japanese Government recently outlined a programme for homegrown hypersonic weapons, India recently came close to successfully testing its own Hypersonic Technology Demonstrator Vehicle whose first test resulted in failure.

As the EurAsian Times reported last year, India conducted the maiden launch of a new hypersonic technology demonstrator vehicle last year but failed to demonstrate the technology. The vehicle was test-launched using the Agni 1 missile platform that was to take it up to a proposed altitude where scramjet technology—the ability to fly at speeds in excess of Mach 6 while using atmospheric oxygen as oxidizer—had to be validated with separation of the platform and a short flight at high altitude.

According to reports, while the missile on which the platform was mounted successfully took off from the range, the test could not be completed to demonstrate the vehicle at hypersonic speed as the Agni 1 did not reach the desired altitude for the test.

According to a report in Defense News, Japan has sketched its R&D road map for homegrown, hypersonic weapons, establishing that it is seeking rapid growth in hypersonic capabilities. However, the fact that India and Japan have also joined the race for these almost undetectable weapons, the arms race in the world and especially in the Asian region has begun to increasingly heat up.

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<https://www.defencenews.in/article/India,-Japan-Developing-Hypersonic-Missiles-To-Counter-Looming-Chinese-Threats-809748>