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Deccan Herald
22 Mar, 2016

Towards growth: India to boost defence ties with Saudi Arabia

Prime Minister Narendra Modi's visit to Riyadh next month will see India and Saudi Arabia seeking to boost bilateral defence cooperation with focus on joint exercises and arms production besides transfer of technology.

Modi will travel to Riyadh on April 2 for his maiden visit to Saudi Arabia. He and King Salman, the ruler of Saudi Arabia, will review the bilateral relations and explore ways to build on the strategic partnership of the two nations. Officials told Deccan Herald that one of the areas the two leaders were expected to emphasise for enhancing cooperation in was defence, building on the bilateral Memorandum of Understanding inked in February 2014. Both India and Saudi Arabia are keen to step up military-to-military contact. New Delhi is interested in regular exercise between Indian Navy and Royal Saudi Navy in the Red Sea and Persian Gulf, as well as in Indian Ocean. The Indian Army is also keen to have joint exercises with Royal Saudi Land Force, sources in New Delhi said. Riyadh on the other hand wants New Delhi to offer more slots for Saudi Arabian defence personnel in training facilities in India. Officials said that New Delhi might also help Riyadh set up a training facility for the personnel of the Saudi Arabian special force in the kingdom itself. Indian Navy ships have been making regular friendly visits to ports in Saudi Arabia.

The Indian Air Force aircraft for the first time landed at the King Fahd Air Base in Taif in Saudi Arabia in August 2015. The mission comprised more than 100 high-ranking Indian Air Force officers and airmen onboard Sukhoi MKI fighter aircraft, C-17 Globe Masters, C-130 Super Hercules and IL-78 aircraft, landed in Taif.

The Asian Age
22 Mar, 2016

IAF plans to acquire aerial target drones soon

The IAF is planning to acquire “manoeuvrable expendable aerial target” drones with flares at the tail-end that will serve as targets for laser-guided bombs and missiles fired from fighter aircraft that will give a more visibly accurate account of the outcome of firing at exercises such as the one that was held last week over the deserts of Pokhran in Rajasthan. Sources said the IAF wants these drones to be acquired so that it can move to a more modern system of hitting targets from the current “archaic” system of firing at flares. They said the IAF had moved a proposal before the ministry of defence about six months ago for the acquisition of these drones that can be used as targets during an air-exercise. Sources said that currently if a missile explodes even very near a flare instead of hitting it directly, it can be counted as a success since the missile would have hit the target had it been an aircraft instead of just a flare.

The IAF said that it was looking into one incident in which a laser-guided bomb malfunctioned during the recent exercise that had been dropped from an indigenous “Tejas” light combat aircraft.

The Tribune
22 Mar, 2016

Tejas misses target, IAF begins probe

The Indian Air Force is conducting a probe into reasons behind a bomb fired by Light Combat Aircraft (LCA) “Tejas” failing to hit its target during the exercise “Iron Fist 2016” at Pokhran, Rajasthan, on March 18. The LCA, that is nearing final operational clearance, also fired a missile, the ‘R73E’, which hit its target.

A senior IAF functionary gave a clean chit to the LCA, its firing mechanisms and also its pilots, saying a laser-guided bomb (LGB) missed the target. “The miss is a not a big thing. It is a very ordinary occurrence which can be corrected,” the functionary said. Three separate IAF fighter jets had fired the laser-guided bombs and the one of the LCA failed.

The Hindu
22 Mar, 2016

Navy’s aircraft on mission in Seychelles

The deployment signals India’s deepening naval engagement in the Indian Ocean

Signalling India’s deepening naval engagement in the Indian Ocean, the Indian navy has for the first time deployed one of its advanced maritime reconnaissance aircraft to Seychelles for surveillance of the island nation’s Exclusive Economic Zone.

It is the first such deployment of the Boeing P 8I to a foreign country. The aircraft has been in Seychelles since March 20, according to the Navy. The move is “in accordance with the MoU between the Governments of India and Seychelles,” it said in a statement.

“It is a significant tactical development that India is able to extend this kind of surveillance,” said C. Uday Bhaskar, director, Society for Policy Studies. The deployment was a sign that India was a “credible security provider to the smaller states in a consensus manner,” he said.

The aircraft deployment, which followed earlier surveillance missions of the Seychellois EEZ by naval ships, reflects India’s increased maritime engagement in the region. India and China are locked in efforts to widen their respective spheres of influence in the strategically vital Indian Ocean.

India has been reaching out to the smaller Indian Ocean island nations through various Maritime Domain Awareness (MDA) exercises that include Search and Rescue (SAR) support, oil pollution response exercises, and assistance in legal matters. Besides supplying naval vessels and aircraft, the Indian navy has supported countries such as Sri Lanka, Mauritius, Maldives and Seychelles with training, hydrographic surveys, surveillance operations and counter-terror patrols.

“What we are seeing is China and India trying to expand their presence in the extended Indian Ocean region. India is of course the natural choice for the smaller nations because of geography and politics,” Mr. Bhaskar said.

The Indian Navy has, in the past, undertaken surveillance missions in the Seychellois EEZ twice a year, but by deploying naval ships. The P 8I is a cheaper, economical, faster and more effective option than the naval ships, and sends a signal about navy’s overall ambition and capabilities.

The last such surveillance deployment was undertaken by ships of the 1st Training Squadron of the Indian Navy in October last year.

Pointing out that P 8I is at the higher end of the spectrum in terms of surveillance and anti-submarine warfare capabilities, Mr. Bhaskar said he was intrigued by the “professional compulsion that may have led to the choice of a P 8I over a Dornier.”

The navy said in a statement that the aircraft will remain deployed till March 23. “During this period, the aircraft will undertake surveillance of the Seychellois EEZ. The deployment will also facilitate professional interaction between the aircrew and the Seychelles People’s Defence Force (SPDF).

“Deployment of Indian Navy’s latest and technologically most advanced maritime reconnaissance aircraft is an indicator of India’s commitment towards ensuring the security of Seychelles EEZ. This deployment would assist in curbing illegal activities and piracy and contribute towards security and stability in the Indian Ocean Region,” the navy said.

Coast Guard patrol ship commissioned

Arnavesh, the 50-metre long, 300-tonne vessel is the 16th vessel among the 20 in this category built by Cochin Shipyard Limited

The fast patrol vessel (FPV) of the Indian Coast Guard ICGS Arnavesh was commissioned at Visakhapatnam by Flag Officer Commanding-in-Chief Eastern Naval Command Vice-Admiral H.C.S. Bisht on Monday.

The 50-metre long, 300-tonne vessel is the 16th vessel among the 20 in this category built by Cochin Shipyard Limited (CSL). The vessel, which is propelled by triple Rolls Royce Kamewa water jets, can achieve a maximum speed of 33 knots and carries a crew of five officers and 34 men on board.

Fitted with the state-of-the-art navigational and communication equipment, including night vision capabilities, its main armament comprise 40/60 Bofors guns.

Commissioning the FPV, Admiral Bisht said that the role of Coast Guard has now become 24/7, and it plays a very active role in coastal security, especially when it comes to terrorism from the sea. "Today, the coast is secured by the tri-forces of the navy, coast guard and the marine police," he said.

Admiral Bisht also highlighted the role of Cochin Shipyard and the indigenous capability that the country has achieved in ship building. "Today, CSL is not only building FPVs and other class of vessels, but is also on the verge of delivering to the nation, the first indigenously built aircraft carrier INS Vikrant," he pointed out.

Talking on the role of ICGS Arnavesh, Inspector General of Coast Guard (Eastern Region) S.P Sharma, said that the FPV will primarily focus on surveillance at sea, coastal patrol, anti-smuggling operation, anti-piracy and search and rescue operations.

According to him, Coast Guard is on an expansion mode, as its role in safe guarding the maritime assets in the exclusive economic zone (EEZ) and coastal security has increased over the years.

At present, the Indian Coast Guard has 120 ships, 63 aircraft and 10,000 men, spread across its 42 Coast Guard Stations, five air stations and 10 Coast Guard Air Enclaves. As per Mr. Sharma, 125 ships of different types are under construction at different shipyards, and the idea is to have at least 150 ships and 100 aircraft under operation, across the length of the Indian coast on any given day, by 2019. Mr. Sharma informed *The Hindu* that four new ships will be added to the Eastern Region by the next year.

As of now the Eastern Region that caters from Odisha to Tamil Nadu, has 33 commissioned ships, 11 non-commissioned crafts and 15 aircrafts.

DIG of Coast Guard (Andhra Pradesh) A.K. Harbola, Commanding Officer of ICGS Arnavesh Amit Uniyal and other senior officers were present.

Indian army battles a new enemy: freak weather

869 personnel have died at Siachen glacier between 1984 and December 2015.

Unpredictable and difficult weather is quickly becoming one of the key reasons behind Indian Army's worrying casualty count, as yet another avalanche claimed a soldier's life along the treacherous border with Pakistan.

The latest tragedy comes just weeks after 10 soldiers were buried under snow after their camp in northern Siachen glacier was hit by a major avalanche in February. While one of them, Lance Naik Hanamanthappa Koppad, was miraculously pulled out alive six days after the tragedy, he died a few days later. On February 27, a civilian porter with the Army fell into a deep crevasse in the Siachen glacier and died.

“We should be ready for more such tragedies,” a senior Army officer posted in the region said, pointing out the increasing unpredictability of weather in the higher reaches because of global warming and climate change is something that is “more the norm than the exception.”

After almost two days of a gruelling rescue operation, the Army was able to locate the body of Sepoy Vijay Kumar K in the Kargil heights, buried under 12 feet of snow. Another soldier was rescued a day earlier. The avalanche that buried Vijay Kumar was caused by a mild earthquake.

The death of the soldier is the latest in a series of tragedies to strike Army units deployed along forward areas of the India-Pakistan border, especially on the higher reaches.

Nowhere is the challenge of freak weather starker than in Siachen. According to a government statement before Parliament, 869 Indian troops have died at the glacier between 1984 and December 2015. After this, in 2016, the 10 soldiers were buried under an avalanche, just days after three others were also killed in Siachen.

However, freak weather in the higher reaches, not militancy, is the single largest killer of Indian soldiers.

According to Army statistics, around 300 soldiers are killed a year in road accidents. About 100 soldiers also commit suicide a year. Since 2010, over 500 soldiers have committed suicide.

Last year, a total of 155 security personnel were killed in terrorist operations; of them a significant number were from the paramilitary and police forces.

The Statesman
22 Mar, 2016

Military support flab can be reduced

The national budget announced by the finance minister this year reduced the defence share in real terms, if salaries and pensions are excluded. These alone form about 40 per cent of the budgetary allocation. To support the reduced budget, the defence minister made a pitch for reducing the flab in the military, mainly the army. While the intentions appear noteworthy, there is a need for a detailed analysis as to what can be considered as flab for reduction.

The defence ministry (MOD) has under its wings a large number of civilian organizations, some of which are the Indian Ordnance Factories Service (IOFS), Military Engineering Service (MES), Defence Research and Development Organization (DRDO), Indian Ordnance Factories health service and Armed Forces Headquarters Civil services. All of these are also paid for and funded from the ministry budget. Thus their salary and pension bills also form part of defence expenditure.

The security of the nation is ensured by a force which due to its nature and rules of service is unable to voice its concerns, project its performance to the public and discuss in open forums the capabilities and capacities it requires to fulfil its assigned tasks. For the public at large there is a view that reducing the military would have minimum impact on national security, as also result in savings to the exchequer. To clarify, the same was intended just prior to Kargil and the military strength was reduced by 50,000, however it was rolled back once battle was joined. The military strength is based on the nation’s ability to fight on two fronts, in a worst case scenario, aggressively on one and defensively on the other.

The comment by the defence minister to reduce the flab or in military terms the 'tooth to tail' ratio needs to be read in depth. The tail should not be considered the uniformed tail alone. In reality the tail spreads from the DRDO establishments to the IOFS and other allied services and finally onto the military. Within this sector there is tremendous scope for reduction. Most of the organizations under the MOD were created post independence, when the government kept all requirements of the military under its central control. There is a complete reversal of this policy by the adoption of the 'make in India' mantra.

A few examples of organizations which can be reduced or disinvested would clarify the concept. The vehicle factory at Jabalpur functions under the ordnance factories board located at Kolkata and acts as an assembly line for vehicles purchased in 'Complete Knocked Down' (CKD) condition from Ashok Leyland, Hosur. The factory was established to manufacture Shaktiman trucks which have since been discarded. Its present status results only in increased cost. A similar case exists in regard to factories producing clothing and other common requirements presently available in the open market. Thus many loss-creating and meaningless factories can be closed or sold.

The ammunition for artillery and tanks are manufactured in ordnance factories employing outdated technology. Being government organizations and possessing monopoly while being under the same ministry, they produce poor quality ammunition which has resulted in fatal casualties and that too at exorbitant cost as they need to display profit. Outsourcing to the private sector and disposal of these facilities would in addition to bringing revenue and cutting costs, also ensure better quality at competitive prices. A similar audit of other establishments could result in even greater reduction.

India is vigorously pursuing the make in India philosophy. Therefore, Research and Development (R & D) could also come under the same ambit. The private sector is more than willing to invest in defence R and D. Other than the rocket establishments, most other DRDO organizations have failed to produce worthwhile results commensurate to investment of funds. These could be considered for closure or privatization. Such an action would ensure infusion of funds and technology with modern equipment.

The MES is an integral part of every cantonment and tasked to provide maintenance services for upkeep of facilities. They were established when cantonments were far flung and lacked any townships in the vicinity. Presently, irrespective of location, population exists close to cantonments and the communication network ensures proximity to business establishments. Therefore the services provided by the MES can be outsourced at much lesser cost to the exchequer. Only minimum staff can be retained for monitoring purposes. This makes economic sense as the same is the norm in every corporate establishment. The military farms, which produced milk for the military, at a much higher cost, had outlived their utility. The government took a decision to close them down. However, it has been years since the decision but their closure is nowhere in sight.

The military itself has done a series of internal studies to reduce its support echelons or tail. It initially raised its support echelons on the principle of a war being fought by them alone. In reality, other than in remote mountainous terrain, the war would be a national effort and would involve the participation of almost the complete male population of the belt close to the battle area. In addition, with procurement of 'off the shelf' equipment, repair facilities are available locally. Thus there is scope for reducing support manpower, enabling reduction in strength.

The examples given here are only to indicate that there is scope to close down redundant manufacturing and maintenance establishments and prune the flab at the central level. This is being avoided, due to fear of unions and vote bank politics. A government keen for national development and creating savings for the exchequer can take stringent measures and act against 'white elephants'. Defence is no longer a holy cow and its requirements can largely be met by the private sector at a much reduced cost. Further, if 'make in India' is the mantra of today, then the defence ministry should support it by closing or selling redundant factories and establishments.

New defence procurement procedure gets govt nod

The defence ministry on Monday said the liberalised guidelines on black listing norms and hiring of agents by armament companies should be ready by next month, even as it cleared the long-delayed new defence procurement procedure (DPP) that will come into effect from April 2.

But the separate chapter in the DPP on “strategic partnerships“ with selected private sector companies in six broad areas, ranging from aircraft and warships to tanks and guided missile systems, is yet to be finalised. “It’s going through an extensive exercise that will take another month or two. It will require financial and Cabinet Committee on Security approvals,“ defence minister Manohar Parrikar said after a meeting of the defence acquisitions council (DAC).

But he did say the target was to kick off one or two projects under the strategic partnership model by the end of this year. Production of ammunition or ordnance, the long-delayed Project-75-India programme for construction of six new-generation conventional submarines as well as “maybe a fighter and a helicopter“ projects were in the “zone of consideration“, he said.

On the blacklisting policy, Parrikar said, “The well-calibrated guidelines are almost finalised now... they should be out in the first half of April.“ This easing of the blacklisting norms will be a marked departure from the “unilateral“ and indiscriminate blanket bans imposed during the UPA regime, which often adversely impacted military modernisation, as earlier reported by TOI.

Under the new guidelines, with graded punishments commensurate with the wrongdoing committed, procurement of spares for platforms and equipment already purchased from a blacklisted company will be allowed. Moreover, companies already blacklisted will now be able to appeal to the government for a review based on merits of the case.

Govt pays OROP dues to 13 lakh as Holi gift

PNS ■ NEW DELHI

In an effort to give a Holi gift to ex-servicemen, the government has already paid dues under the One Rank Pension (OROP) to more than 13 lakh till last week and the remaining seven lakh will be covered in the next few days, Defence Minister Manohar Parrikar said here on Monday. Announcing this here, he said the payments under the OROP to 13 lakh veterans amounted to Rs 2,293 crore and it was released through State Bank of India, Punjab National Bank and Defence Pension Disbursing Offices(DPDO). The OROP implementation decision was taken in September last year and notification for disbursement was issued in November. As on March 17, the DPDOs have released an amount of about Rs. 606 crore to about 3.20 lakh defence personnel while the SBI as released Rs. 1,337 crore to 7.75 lakh pensioners which includes Family Pension cases. The PNB has released as on March 17, an amount of about Rs. 350 crore to about 2.07 lakh pensioners which includes Family Pension cases, he said.

पंजाब केसरी
22 मार्च, 2016

चीन चाहता है भारत से ऊंचे स्तर का मंगल यान

बीजिंग,(भाषा): चीन ने 2020 तक अपना पहला मंगल अन्वेषण यान भेजने की योजना बनाई है और उसके वैज्ञानिकों को आशा है कि समग्र मिशन भारत से कहीं ऊंचे स्तर से शुरू होगा। भारत अपने पहले प्रयास में वहां पहुंचने वाला पहला देश है। अंतरिक्षविज्ञानी ये पीजियान ने कहा कि 2020 में होने वाले प्रक्षेपण की तैयारी चल रही है और अन्वेषण यान के 2021 तक मंगल पर पहुंचने की संभावना है।

Enter the UN soldier - I

Military intervention by the UN, in the context of developments in the Middle East and around the globe, call for reflection. There have been many such interventions in the second half of the 20th century; running the gamut from large-sized interventions to small-scale ones. There were successes as well as failures; the successes making up for the failures. Whatever the individual outcomes, they played an important part in laying the groundwork for global cooperation between military establishments of many countries. In addition to the UN, several countries that built up considerable peacekeeping expertise under its umbrella carried out their own studies for drawing lessons. The majority of the earlier UN interventions took place in the “finding-their-feet” period of the newly independent nation-states of the post-colonial period, after the end of World War II. The situation was exacerbated by the cold fog that settled in soon thereafter and which took nearly half a century to lift.

What passed for consensus in the Security Council resolutions were essentially trade-offs between the major cold warriors who treated the UN as an extension of their proxy military rivalries being fought out in so many theatres. The nation states, numbering over a hundred, that emerged consequent upon the withdrawal of the colonial powers, often fragmented or faced unrest; largely due to the fact that they did not always reflect the prior state of geography or ethnicity obtaining in these regions when the areas were gathered into the fold of the European powers carving out their respective empires in the 18th and 19th centuries. Even after granting independence the colonial powers did not always refrain from interfering in the regions from where they had withdrawn. The feuds continued to fester because of direct interference by these powers in one form or another. Strife was not always endemic to the region; very often it was imposed on the region from the outside. In many parts of the world this continues to be the case even now. The settling down period may get extended by several decades, going up to the end of the century.

UN military interventions of the 21st century have often turned out to be different from the peace-keeping operations of the earlier post-war decades or the peace enforcement operations of the last decade of the 20th century. To begin with, the nature of warfare has undergone significant modifications, especially in Africa where many of the 20th century interventions took place. A number of nation states, or at least a majority of them, have settled in after long struggles, while other feuds have resurfaced. In either case the native military establishments involved in the struggles have developed considerable military prowess of a type that they have put paid to the Clive syndrome. This in its 21st century manifestation -- again largely restricted to Africa -- implied that a few well-armed European mercenaries could help turn the tide in the countries in which they intervened, often facilitating outright takeovers.

Another factor that is influencing military interventions relates to the global increase in what can be termed as the ambient lethality index (ALI). The ALI of the 21st century, which continues to increase with each passing year, will not only affect UN peace-keeping operations, but law enforcement operations almost everywhere in the world unless a democratized UN is able to bring about a dramatic change in the transfer and sale of lethal weapons. The desired change can only be brought about through interactive harmony and not through selective (coercive) measures. In the past these have been selectively applied by a handful of powers in an ad hoc manner based upon the inclinations or compulsions of leaders whose interests may not have always coincided with the global interest as perceived by the majority of their countrymen. The selective application of curbs, grandiloquently termed as sanctions, has muddied the waters of global harmonization. It has removed the rational base for international interaction. If the trend remains unchecked, it could eventually undermine the very concept of jurisprudence on which the democratic functioning of human society is based. If a rationality index -- based upon the justness of the behaviour of states when interacting with other states on the basis of agreed upon multilateral protocols -- were to be set on a scale from zero to nine, then the chances are that the major world players at the close

of the century and the commencement of the new century did not merit a rating of more than two or three. Examples of cheating by states even when there was no security or other such compulsion to do so are too numerous to recount. In most cases the causes for cheating related to venality or political compulsions of the individual or a party as opposed to the interests of the state. At best, these were short-sighted violations with no clear gains. But they effectively demolished the rationale of the protocols. Several cases of clandestine transfer or sale of weapons as well as false certification by chief executives of states to their own legislative branches have come to light. The hoodwinking has reached such proportions that it might take a long time to undo the damage to the sanctity of international protocols. When violations take place at the hands of the (very) prime movers who initiated the protocols in the first place no sane global order can come about.

Furthermore, the respect for protocols entered into with much fanfare gets diminished; and following the example of the leader everyone down the line does his little bit or, to put it differently, does one better. This has happened in the global arms bazaar. Everything is available, at a price. Sanctions are an irritant which merely serve to hike the price. The result is obvious. It is reflected in the enhanced ALI. A mere 30 years ago, barring the USA (and other countries with liberal gun laws) handguns were a rarity in most parts of the world. Those who possessed them kept single action, single-shot weapons for personal safety. A constable accompanied by two unarmed policemen could go out and effect an arrest. This is no longer the case. The world is awash with AK-47s and other sophisticated weapons. Prices too have tumbled, bringing an automatic within the reach of most people wishing to acquire one. Going beyond the individual the arsenals of ordinary criminal gangs now include bazookas, grenades and secure communications. Going still further to terrorist groups and drug cartels the weapons sophistication has appreciated to include IEDs, mines, bazookas, night-vision devices, high powered boats, helicopters, aircraft, midget submarines and a host of other sophisticated devices which even many of the law enforcement agencies do not possess.

Laboratories of the front-runners keep on designing more sophisticated weaponry across the entire weapons spectrum range regardless of consequences, to others or their own societies. An apparently irreversible momentum has been generated worldwide. As new technology is refined, surplus stocks of older weapons, no matter how lethal, are clandestinely released into the market, irrespective of embargoes, avowed government policies or pronouncements. There is no logic to it. It is an uncontrollable spiral. The situation will be further aggravated in the 21st century unless across-the-board global harmonization takes place in a non-discriminatory manner while it is still possible to achieve such harmonization at a cost which does not decimate mankind.

The havoc, which will be wrought by the phenomenal increase in ALI, would be far greater on advanced societies than on deprived populations. Restrictions on free movement to combat the deadlier menace (well below the nuclear threshold) surfacing in every airport, seaport, bus terminal, metro line, railway station and a host of other places has become more routine and more cumbersome. All encompassing global harmonization measures, entered into in good faith between all nations, could conceivably put a halt to further ALI increases at this juncture. After a few years conditions could deteriorate to a level where more than 70 per cent of the world's population would be past caring. All because the leaders of the leading powers of the developed world could not muster the courage at the close of the 20th century to restrain their cowboys: the military -- industrial complex.

The Statesman
22 Mar, 2016

N Korea Fires 5 Short-Range Missiles into Sea of Japan

Seoul, 21 March:North Korea today fired five short-range missiles into the sea off its east coast - the latest in a series of missile launches ordered by leader Kim JongUn amid rising military tensions.

The launches came just days after the North test-fired two medium-range missiles, in what the UN Security Council described as an “unacceptable” violation of UN resolutions.

Tensions have been soaring on the divided Korean peninsula since the North carried out its fourth nuclear test on January 6, followed a month later by a longrange rocket launch that was widely seen as a disguised ballistic missile test.

The Security Council responded earlier this month by imposing its toughest sanctions on North Korea to date.In recent weeks, Pyongyang has maintained a daily barrage of nuclear strike threats against both Seoul and Washington,ostensibly over ongoing largescale South Korea-US military drills that the North sees as provocative rehearsals for invasion.An official with South Korea's Joint Chiefs of Staff said the five shortrange missiles were launched from near the eastern city of Hamhung,beginning just before 3:20pm (local time), and landed in the East Sea (Sea of Japan).

He said analysts were still gathering intelligence on the precise missile type.

The North had fired two short-range missiles into the East Sea on March 10, using what state media described as a new high-calibre multiple rocket launcher.

The Tribune
22 Mar, 2016

New drug to battle resistant TB

Govt introduces technique to reduce diagnosis time to 2 hrs

India today took a huge step forward against the rising burden of drug resistant TB with the Government introducing a brand new class of drugs discovered after a research of 40 years.

Called Bedaquiline, the new anti-TB drug, will be available to patients of drug resistant TB at six centres across India. These are BJ Medical College, Ahmedabad; Government Hospital for Thoracic Medicine and NRL National Institute of Research in TB, Chennai; Guwahati Medical College; KEM Hospital, Mumbai; National Institute of TB and Respiratory Diseases, Delhi; and Rajan Babu Institute of Pulmonary TB, Delhi.

Bedaquiline introduction will help Government’s “End TB by 2030” drive as it improves treatment outcomes. The current treatment success rate in Multi Drug Resistant TB (of which India has the highest global burden) is under 50 per cent. A major reason for suboptimal outcome is additional resistance to the most important second line TB drug available in India – Fluoroquinolone.

“The new anti-TB drug will help us treat resistant TB better but we must guard against even this drug becoming resistant and invest in new research,” TB expert and ICMR chief Soumya Swaminathan said on World TB Day today.

India sees 72,000 new cases of multi drug resistant TB annually and 2,700 cases of new extreme drug resistant TB cases, which are very hard and expensive to treat. Bedaquiline will be given to patients who have started showing resistance to second line TB drugs. It will cost Rs 1 lakh per patient per year. “The initial 600 doses are being given by Johnson and Johnson under its compassionate use policy and the latter consignment will come from USAID on donation. After that, we will budget for the drug from our

funds,” CK Mishra, Additional Secretary, Health said, adding that Bedaquiline will be available only in the public sector to prevent its misuse.

Additionally, Health Minister JP Nadda today announced the expansion of TB testing facilities with the launch of new Cartridge Based Nucleic Acid Amplification Testing (CBNAAT) devices for TB diagnosis. One device will be available in each of India’s 670 districts soon. It will reduce multidrug resistant TB diagnosis time from a month to just two hours. Estimated TB prevalence in India is 2 million annually. Of these, the public health system detects only about 15 lakh. Most of the rest go to private practitioners and remain undetected. “Private sector is responsible for India’s missing TB patients but now they are reporting the disease to the government,” Nadda said.

The Pioneer
22 Mar, 2016

Rare Comet ‘Twins’ To Zip Past Earth

Astronomers the world over kept their high-end telescopes set on the sky on Monday to see the closest ever flyby of two comets that may have more in common than their intriguingly similar orbits — they may be twins of a sort.

Comet 252P/LINEAR, approximately 750 feet in size, will zip past Earth on Monday at a range of about 5.2 million kms. On Tuesday, comet P/2016 BA14 will safely fly by our planet at a distance of about 3.5 million kms.

This will be the third closest flyby of a comet in recorded history next to comet D/1770 L1 (Lexell) in 1770 and comet C/1983 H1 (IRAS-Araki-Alcock) in 1983.

“Comet P/2016 BA14 is possibly a fragment of 252P/LINEAR. The two could be related because their orbits are so remarkably similar,” said Paul Chodas, manager of NASA’s Center of NEO Studies (CNEOS) at the Jet Propulsion Laboratory in Pasadena, California. While both comets will safely fly past at relatively close distances, anyone hoping to see them will need powerful, professional-grade telescopes, due to their relatively small size.

The time of closest approach for comet 252P/LINEAR on March 21 was around 8:14 am EDT (5:44 pm India time).

The time of closest approach for P/2016 BA14 on March 22 will be around 10:30 am EDT (8 pm India time).

The approaches of these two comets will be the closest they come to Earth for the foreseeable future.

Deccan Herald
22 Mar, 2016

Vitamin B3 supplements may delay ageing: Study

London: Use of nutritional supplements for Vitamins B and its derivatives may serve as potential tools for delaying the ageing process in humans and age-related diseases such as diabetes, a new study suggests.

Scientists from the Spanish National Cancer Research Centre (CNIO), University of Valencia, and IMDEA Food from Madrid, tried to increase the global antioxidant capacity of the cells, rather than just one or a few antioxidant enzymes.

To achieve this, researchers have focused on increasing the levels of NADPH, a simple molecule that is important in antioxidant reactions.

The researchers used a genetic approach to increase NADPH levels. They generated transgenic mice with an increased glucose-6-phosphate dehydrogenase (G6PD) expression in their bodies, one of the important enzymes for production of NADPH.

The results show that an increase in G6PD and therefore in NADPH, increases the natural antioxidant defences of the organism, protecting it from oxidative damage, reducing ageing-related processes, such as insulin resistance, and increasing longevity.

When researchers analysed long-lived transgenic animals, they found that their levels of oxidative damage were lower than in non-transgenic animals of the same age.

They also studied the propensity of these animals to develop cancer and found no difference, suggesting that enhancing G6PD activity does not have an important effect on the development of cancer.

When researchers measured the ageing process in the transgenic mice, they found that the animals with a high G6PD expression and high levels of NADPH, delayed their ageing, metabolised sugar better and presented better movement coordination as they aged.

In addition, transgenic females lived 14 % longer than non-transgenic mice, while no significant effect on the longevity of males was seen. This increased longevity is striking taking into account that until now attempts to increase longevity by manipulating individual antioxidant enzymes had failed.

Deccan Herald
22 Mar, 2016

Robot tutors for autistic children

Washington: Scientists have created a robot with artificial intelligence that teaches children with autism to recognise facial expressions in people.

Children with autism have special difficulty in expressing emotions, usually have no social skills and face major problems when communicating.

The humanoid robot TecO is 50 centimetres tall, has a face and arms of a bear; it is made of aluminium and its operation is electric.

It detects neural signals using a headset or a hood, which has electrodes mounted on the child's head and records their signals.

The signals are sent to a computer that translates them into information that is interpreted by a psychologist or a neurologist.

"It detects certain intentions, such as moving an arm, if the kid is sleepy or alert, but doesn't read thoughts, the expression must be made clear," said David Silva Balderas, researcher at the Monterrey Institute of Technology and Higher Education (Tec de Monterrey) in Mexico.

"If the robot registers sadness in the child, it then modifies its mode of action to change that feeling," Balderas said.

Children with autism are stressed by human behaviour and causes them anxiety because it is unpredictable, whereas a robot can be made predictable, said Demi Grammatikou, member of the team that created TecO.

"What we have seen is that the technology caught their attention and using technological tools lowers their anxiety level," said Grammatikou.

Using TecO as a tool in therapy for children with autism makes significant progress in only two months, although every child is different.

Emotions are measured through facial expressions, which traditionally is done by observation, but the robot uses cameras that record the number of times that the kid turns to see it, researchers said.

The eye contact between the two is what denotes progress, they said.

"It gives us tools to measure quantitatively what is happening, to see how many times the child looked at the robot," said Grammatikou.

"The robot can see what the infant does, and independently decide what is needed. If there is no eye contact, TecO can make a sound or movement to regain the attention. Thus the child reads the robot and the robot the child," said Grammatikou.

According to the World Health Organisation, one per cent of the world population suffers from autism.

"From a social point of view, it does not seem to impact so many people, but when you think about one per cent of the total population, is a significant number," said Pedro Ponce Cruz, from Tec de Monterrey.

The Tribune
22 Mar, 2016

South Indian biosphere reserve on UNESCO list

India's "unique" Agasthyamala Biosphere Reserve is among 20 new sites added by the UN's top cultural body UNESCO to its World Network of Biosphere Reserves.

The International Coordinating Council added the new sites during a two-day meeting on Saturday in Lima, capital of Peru, bringing the total number of biosphere reserves to 669 sites in 120 countries, including 16 trans-boundary sites.

The newly adopted sites include 18 national and one trans-boundary sites shared between Spain and Portugal.

"Located in the Western Ghats, in the south of India, the Agasthyamala biosphere reserve includes peaks reaching 1,868 metres above sea level. Consisting mostly of tropical forests, the site is home to 2,254 species of higher plants including about 400 that are endemic," UNESCO said.

"It is also a unique genetic reservoir of cultivated plants especially cardamom, jamune, nutmeg, pepper and plantain. Three wildlife sanctuaries, Shendurney, Peppara, Neyyar and Kalakad Mundanthurai Tiger reserve are included in the site," it said.

The Agasthyamalai Biosphere Reserve (ABR) was established in 2001 and is spread across the two states of Kerala and Tamil Nadu.

Biosphere reserves are places for learning about sustainable development aiming to reconcile the conservation of biodiversity with the sustainable use of natural resources.

New reserves are designated each year by the International Co-ordinating Council of the UNESCO's Man and the Biosphere (MAB) Programme, which brings together elected representatives of 34 UNESCO Member States.