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More Akash systems for Army

By Dinakar Peri

Defence Acquisition Council bats for indigenously developed missiles

The Defence Ministry has decided to cancel the Army's global contest for Short Range Surface to Air Missile (SR-SAM) systems and instead procure two additional regiments of the indigenously developed Akash missile systems. The decision was taken at a meeting of the Defence Acquisition Council (DAC) chaired by Defence Minister Arun Jaitley two weeks ago. The Army is expected to begin inducting the systems by December 2018. "The DAC has cancelled the global buy of two regiments of SR-SAM. The case continued for 5-6 years and trials of certain equipment were conducted. The DAC has now decided to go in with additional Akash systems," a defence source said on Monday.

The Army has a requirement for four regiments of SR-SAMs. It had earlier ordered two Akash regiments and formally began inducting them in May 2015. Two more regiments were meant to be procured by a global tender for which competition was under way between 3-4 global firms.

Of the Akash systems, the first regiment has been inducted and operational and induction of the second regiment will be completed in the next 2-3 months. On the new regiments, the source added, "Lot of improvements have taken place in the vehicles and systems since the initial development. The new system will be operationally more compact and mobile."



Mon, 29 May, 2017

(Online)

DRDO chosen for Rs18,000-cr short-range missile contract

Defence Research and Development Organisation (DRDO) has been selected for a Rs18,000-crore contract to supply short-range missiles to Indian Army. The decision was taken at a meeting of the Defence Acquisition Council chaired by defence minister Arun Jaitley on Saturday. The DAC preferred state-run DRDO over foreign vendors, including from Sweden, Russia and Israel for supply of the Akash surface-to-air missile system, sources said.

Akash missiles can be used for protection against incoming aircraft and unmanned aerial vehicles of the adversaries and the system would be deployed on both the Pakistan and China border, sources said.

The Army, however, is reported to have sought improved missiles that are on par with foreign ones in terms of a few specific systems and equipment. DRDO is reported to have assured incorporation of the systems suggested by the forces. Akash missiles are already being inducted into the Indian Air Force as the missiles have proved their worth.

The selection process has been slow, considering that the three foreign vendors from Israel, Sweden and Russia were in the race for bagging the contract for which the process was initiated in 2011, and trials were held in 2014. While it took nearly seven years for the selection process for a vendor for the air defence system to conclude, DRDO has also lagged behind in the indigenous development of aircraft and land warfare systems. However, the development of a range of strategic missile systems by DRDO has helped improve the capabilities of the armed forces while also saving precious foreign exchange.

The Army wanted two regiments of the missile system to be provided to the army air defence, which has been operating with obsolete equipment for a long time, with the government itself saying that around 98 per cent of it was outdated. The cabinet committee on security has already cleared a Rs17,000-crore Medium Range Surface to Air Missile project with Israel.



Mon, 29 May, 2017

(Online)

Spread over 1,000 acres, ATR cost Rs 290 cr to build

DRDO to create green cover in arid region, boost local economy

Ajay Singh, director (civil works and estates) of DRDO, said the country's first-of-its-kind Aeronautical Test Range (ATR), which covers an area of 1,000 acres, has been constructed at a cost of Rs 290 crore.

Briefing about the features of ATR at its inauguration here on Sunday, he said DRDO was testing unmanned aircraft in Kolar earlier. Following the construction of the international airport at Devanahalli near Bengaluru, DRDO was forced to look for an alternative location.

The state government allotted 4,090 acres for the facility. ATR has been constructed as per international standards. It is the range for research, testing, development of different types of aircraft required for the armed forces. It has a runway of 2.2 km, which can be expanded for another km.

It has a range control centre, two hangars and radar laboratory. The lab here uses technology to establish primary and secondary data related to national security. The ATR has a total of 31 buildings, including security and administration, spread over 24,000 sq m.

Singh promised that DRDO would take steps to transform the range into a green area and strive to reduce temperature in this arid region. Rainwater harvesting has already been adopted. In the days to come, technology would be used to convert the land full of bushes into a green area. Steps would also be taken to enhance local economy.

Tapas aircraft, AEWS on display - Captain Stephen operated the unmanned aircraft Tapas and airborne early warning systems (AEWS) as part of the demonstration to mark the inauguration of Aeronautical Test Range on Sunday, in the presence of Defence Minister Arun Jaitley.



Tue, 30 May, 2017

Defence Manufacturing-I: End to “our defence, their weapons”?

By Ajay Shankar

The key to a great nation status is autonomy in defence manufacturing. India opened up defence manufacturing for the private sector about 15 years back. A new tack is being tried to improve on the modest success. In a two-part series, we examine the pitfalls, the prospects and a pragmatic strategy to achieve this goal.

Radical transformation

- India has tried the PSU-led licensed production route with tech transfer to achieve self-sufficiency.
- Separately, DRDO undertook tech and systems development to replace licensed production.

- *Department of Atomic Energy and DRDO have ensured a credible strategic deterrence by missiles and nuclear weapons.*
- *However, rest of the defence sector needs a radical transformation which is not in the commercial interest of major global arms firms.*
- *The process involves huge costs and willingness to live with delays and failures.*
- *It entails an intensive dialogue with stakeholders and a medium-term assured production plan.*

Real strategic autonomy needs national technological and production capabilities in armaments. This is the reason why every major industrial power has nurtured a national defence industry. Even while being secure under the overwhelming military superiority of the US-led NATO alliance system, the French and the British maintained and developed full spectrum national defence production capacities. Staying outside the alliance system, Sweden, a small country, had a globally competitive defence industry and still makes world-class fighter planes. Even the Germans and the Japanese have developed those segments of the defence industry that they were permitted to, following total defeat in World War II. The Germans have been a major partner in the European effort to develop the world-class Euro Fighter plane.

Credible nuclear deterrent

India, after the traumatic experience of 1962, tried to develop a national defence industry insisting on licensed production with technology transfer in the Ordnance Factories and Defence Public Sector Undertakings. Separately, through the DRDO, India pursued technology and systems development with the expectation that nationally developed platforms would gradually replace the need for imports and self reliance would be achieved.

The Atomic Energy Commission pursued nuclear capability and India succeeded in creating a credible nuclear deterrent. The DRDO's missiles have been increasing the distances they can target. These capacities have given India credible strategic deterrence. To prevent this, a very stringent international technology denial regime was put in place. India succeeded in spite of this with patience and determination.

Paradoxically, India today has the distinction of being one of the largest importers of armaments in the world and is expected to remain one in the coming years. Radical transformation is clearly warranted and needs a medium term strategy backed by a coherent action plan with a broad measure of buy in of all stakeholders. A conceptual consensus free from common misperceptions is a prerequisite.

Ownership and control

Unlike other industries where the neo-liberal globalisation consensus has been that ownership and control do not matter, in defence it does. This is why every major strategic power has a national defence industry. Production by Indian firms under license from technology providers, or, by joint ventures with FDI and foreign control over management and technology are materially the same as imports from this perspective, even though there is greater local value addition and job creation. It is also not in the commercial interest of major global arms firms that India succeeds in creating a national defence industry as they would stand to lose a large market and profits.

To illustrate from non-military experience, Bajaj and Hero became "national" in this sense only after they had the confidence to become independent of Vespa and Honda, their technology partners. The key was their development of the capacity to successfully design platforms and undertake system integration. Real wealth and value for firms today flows from this and is generally understood as IPR in the broad sense. The example of these two-wheeler firms also gives a reality check of the extent of our actual national industrial capability as other than Tatas and Mahindras, not many examples of Indian firms developing their own products come to mind easily.

Established firms do not easily part with critical technologies as they would like to retain their markets. This is also the reason why offsets would not deliver. This has been seen in the experience of licensed production of industrial goods by most Indian firms who have had to repeatedly seek technologies with attendant royalty payments.

A national defence industry has the nation's armed forces as the sole buyers. Platforms and products are developed for specific needs and the development costs are huge. Inherently there is a monopoly supplier and a monopoly buyer situation with a non-competitive, negotiated price system. Development costs, if they are modest, can be incurred by the firm and recovered in the sale price. Where the costs are large, these are financed for the firms by the government and are not factored into the sale price of the weapon. Exports become relevant only after domestic success.

National defence industries have been nurtured by governments either through government companies which became gradually professionalised with increasing private investment, or, through private firms which were developed as long-term partners for different segments of military equipment. The process has always involved huge costs and willingness to live with delays and failures. Development of new technologies and systems entails risk with uncertain lead time and costs. Only at the stage of serial production is there a reasonable fix on actual costs. The design of the system put in place in the country after 1962 is complex and challenging. Costs in defence are high and so are profits. The note of caution about the "Military Industrial Complex" sounded by President Eisenhower towards the end of his Presidency about 60 years back remains apt in the US even now.

Financial constraints

The major factors which have delayed success in self reliance in conventional armaments also need to be appreciated. India has faced a two-front situation with acute financial constraints, where there has always been the tension between the needs of the Armed Forces for new equipment and replacement, and the difficulties of the government in providing the requisite financial resources. For the Forces, getting quickly the best possible equipment (imported, naturally) has been the overriding objective. Then there has been the larger-than-life "ghost" of Bofors and the consequent paralysis in decision making where for procurement, procedure has become paramount and outcomes marginal, if not irrelevant. The classic illustration is the cancellation of the seven- year effort to acquire urgently needed 126 fighter planes in a competitive multi-vendor bid process. Another major factor has been the relative weakness of India's overall technical and industrial development. Even though defence manufacturing was opened up for the private sector about 15 years back, progress has been quite modest so far in the absence of clarity about the medium to long-term role of the private sector and a pragmatic strategy to achieve it.

Many new decisions are now being taken and initiatives are underway, especially to enhance the contribution of the private sector. It is essential that not only individual decisions be right but that they all add up to a holistic and viable game plan which gives confidence that in about five to seven years there would be a rapid reduction in import dependence. (To be concluded)

MAIL TODAY

Tue, 30 May, 2017

Navy takes a green initiative

THE Navy is fast moving toward making its state-of-the-art headquarters building next to the defence ministry headquarters in South Block. The force has come up with a design that will ensure that not a single tree is cut during the construc-

tion of the office complex. The building would be rated seven star and take eight years to be completed after the process starts. A large number of barracks and canteens have been removed to make way for the construction.

State of Play - Officer in the Barracks

By Pranab Dhal Samanta

Gen Bipin Rawat could be the architect of a new working pattern for the army

There's a discernible churn in the army, and its new chief General Bipin Rawat is at the heart of it. No need to start judging just yet. But it's important to understand the moving pieces. Because if it stays the course, this could mark a significant break from the pattern of working the army has settled itself into in the recent past.

Three decisions of Rawat stand out -rather, set him apart from the routine his predecessors followed.

First, the decision to give a commendation card to Major Leethul Gogoi despite all the outrage, for tying up a Kashmiri stone-pelter to his vehicle as a human shield to bring out stranded polling staff. Second, ending the periodic government-military pay commission stand-off through a new deal despite internal resistance. And third, moving a proposal to end the deployment of combatants as 'sahayaks' in face of continuing internal dissent.

Let us start with Gogoi. He is not the typical upper-crust army officer who joined the army through the National Defence Academy (NDA). In fact, Lt Ummer Fayaz, the slain Kashmiri officer, was in that privileged ex-NDA lot, who usually, due to their early grooming and younger age of commission, have the best chance of making it to the higher rungs of the army hierarchy.

Gogoi, on the other hand, joined the army not as an officer but as a regular soldier in the Assam Regiment. He, however, took the difficult challenge of clearing exams from within the system and made it through the Army Cadet College (ACC) entry.

The strike rate through this channel is usually low, given the tedious transformation one has to make from the lower ranks to the officer cadre. It's not just a job change but a class transformation in a highly conservative saheb-jawaan hierarchy, which has its roots in the colonial origins of the Indian Army.

By publicly acknowledging Gogoi's actions as correct and giving him a Chief of Army Staff (COAS) Commendation Card, Rawat cut through the army's iron-cast hierarchy to send a strong message of solidarity down to the last rifleman. Gogoi, after all, is one among them, who made it to the officer cadre.

Stand at Ease

Most chiefs, like Rawat, would also probably stand by the officer because such seemingly appalling methods are not unusual in the army as long as the larger mission -in this case, the safe exit of polling staff -is accomplished. Except that, as the norm has come to be in such controversial cases in the Valley, the top brass may commend the officer in private while maintaining a public posture of inquiring into the matter.

Rawat broke away from this established norm to institutionally back and honour Gogoi in public. This is a significant shift in the army's approach in Kashmir, a conscious decision to take on the anti-army perception, draw new red lines, and be aggressive in response.

As a result, the army chief has also set the stage for a fresh debate on bringing amendments to the Armed Forces (Special Powers) Act (Afspa) to nullify the Supreme Court order in the matter, which includes a leeway to register FIRs on military encounters.

In many ways, Rawat has ripped open a fundamental question of whether or not the time has come to officially frame the Valley as a 'war zone' so as to pre-empt a repeat of the late 1980s, the last turning point when Pakistan-sponsored militancy entrenched itself in the state.

Pay and pension privileges don't usually go with strategy-making in Kashmir. But these are files that may well lie side by side on an army chief's table. Regardless of the government in power, this is an issue on which the

three service chiefs have mostly presented a united front, to the extent of being criticised as a 'unionised' front. And the army chief, by the sheer numbers of his force, is very much the fulcrum of this solidarity .

Rawat peeled away a bit, secured and consented on a deal that addressed the concerns of majority soldiers, and ended a stalemate because of which the armed forces were not getting their new salaries. While the officer cadre may not have been fully satisfied, particularly at senior levels, the message was once again sent down the rank and file.

The clearest message of recognising the army's changing profile at the entry point was Rawat's move to push a proposal to bar combatants from being made sahayaks. He, instead, feels a small cadre of civilians should be hired for this purpose, so that trained combatants don't have to do this job.

March Forward

He is up against internal resistance on this as well. But just like the phone number he has set up for any military personnel to register a grievance directly with the chief, this again is an effort at cutting past traditional military hierarchy .

For someone, who is sort of army blue blood, being a son of a general officer himself, the hierarchical disruption is unlikely to create a class divide in the army . But what's probably clear is the makings of a new Spartanism under the leadership of an army chief, who for all his pedigree, is surprisingly frugal: he pays bills for even official gatherings at home, and till date, makes it a point to mend and clean his own uniform just like the soldier in the barrack.



Tue, 30 May, 2017

Only 66 of 1,695 rights abuse claims found to be true in 23 years: Army

The Army claims only 66 of 1,695 allegations of human rights violations levelled against it since 1994 had been found to be true following investigation, with another 41 still being probed. For the established violations, around 150 personnel have been punished, and compensation has been awarded in 49 cases, the Army added.

A senior officer stressed on Monday that the Indian Army's human rights record "is one of the best in the world, which is appreciated globally". The Army's claim comes against a backdrop of criticism for the force over the "human shield" episode, which saw Major Leetul Gogoi controversially truss up a civilian on his jeep's bonnet to rescue over a dozen security and election personnel from a stone-pelting mob in Kashmir last month. The officer said the Army had received 1,736 allegations, primarily during counter-insurgency operations in J&K and the northeast, from 1994 to April 2017. "Of them, 1,695 cases have been probed, while 41 are under investigation. Of the cases investigated, 1,629 were found to be either false or baseless," he added.

General Bipin Rawat's move to award the chief of army staff (COAS) commendation card to Major Gogoi even before the court of inquiry into the incident could be finalised, virtually giving him a clean chit, has fuelled criticism over the manner in which the force has handled the "human shield" episode.

The Army chief, however, has made it clear he awarded the COAS commendation card to Major Gogoi to boost the morale of all the young officers and jawans engaged in counter-terrorism operations in a "dirty , proxy war" amid stone-pelting mobs in the Valley.

European liaisons

By C. Raja Mohan

With Russia moving closer to China and an unpredictable administration in the US, India and Europe have much to offer each other.

Prime Minister Narendra Modi's travels this week to Russia, France, Germany and Spain provide an opportunity to recalibrate India's approach to European geopolitics. The current uncertainty in the relations between America, China and Russia demands that India move closer to the European middle powers — France and Germany. Delhi must also devote more attention to other parts of the continent, from Spain to Sweden and Portugal to Poland, that have so much to offer India. Modi's two tasks on this trip are somewhat contradictory.

He needs to arrest the growing drift in relations with Russia, which is privileging the China partnership over that with India, and intensify the engagement with Europe. If the best days of the Russian romance are behind us, an enduring European liaison has become an urgent Indian priority.

Although Indian resources contributed massively to the victory of the allied forces in the First and Second World Wars, India and Europe found themselves marginal to each other in the second half of the 20th century. India's domestic political confusion in dealing with the Second World War, the Partition of the Subcontinent and the Cold War put India and Europe on opposite sides of the great political divide. Delhi aligned with the Soviet Union and Europe was divided into Russian and American spheres of influence.

After the Cold War, and the historic rapprochement between the West and Russia, India did announce the intent to construct bilateral strategic partnerships with Germany and France and collectively with the European Union. Although these partnerships have grown, they have hardly flourished. Europe has been preoccupied with its own integration, India on its neighbourhood and the major powers. Europe and India have remained loveless after the Cold War. Can Modi change that? As the world enters a period of geopolitical convulsion, India and Europe need each other more than ever before.

In the old continent, the facile talk of a "Common European Home" has given way to renewed tensions between Russia and the West. If Russia was miffed by NATO's eastward expansion, Europe has been taken aback by the Russian annexation of Crimea, its powerplay in eastern Ukraine and political assertion across the old continent. If the political understandings negotiated during 1989-91 between the West and Russia have broken down, no European fix appears round the corner.

Meanwhile, India's long-standing faith in Russia as the most reliable international partner has been shaken by Moscow's deepening alliance with Beijing and its political flirtation with Pakistan. It is not that Russia has turned adversarial to India. Not at all. Russia's contradictions with the West have meant Moscow has decided to put a special emphasis on ties with China. Delhi should not let its sentimentalism towards Russia obfuscate the fact that Moscow's political preferences have evolved over time. While the PM must try and preserve what we must and expand what we can in India's engagement with Russia, he needs to recognise that Delhi is no longer at the top of Moscow's pecking order. Beijing is.

Delhi could fudge this as long as India's ties with China seemed stable. With Beijing increasingly constraining India's regional and global space, the fragility of the Delhi-Moscow bond has become exposed. As Russia turns to China and vacates a key position in India's strategic matrix, Delhi must begin to explore the European option. Making the European embrace more urgent is the strange seizure that has gripped the Anglo-American powers today.

After Brexit, "Great Britain" is in danger of turning into "Little England". President Donald Trump's "America First" policies promise great uncertainty in Washington's engagement with Eurasia. Making matters worse are potential wild oscillations in US policy towards Russia and China.

The Europeans fear that Trump might abandon them in favour of a deal with Russia at precisely the moment Moscow is viewed as a threat in European capitals. India, Japan and other Asian nations are apprehensive that the American quest for a special relationship with China will leave them out in the cold. Not all these fears might come to pass. Yet, there is no avoiding the importance of insuring against the flux in US-China relations. India's deepening ties with Japan and Australia are indeed part of that Asian hedge.

During his trip to Europe, Modi can take the first steps towards the construction of a similar middle power coalition on the western edge of the Eurasian landmass. Berlin seems ready. After Trump's recent tour of Europe, Chancellor Angela Merkel warned the German people that the days of depending on Anglo-Americans for European security might be over.

"We Europeans truly have to take our fate into our own hands," she said. France has never lost its geopolitical tradition and was the original proponent of the case for a multipolar Eurasia.

After nearly three centuries of global dominance, the Anglo-Americans are gazing at their navel. The Slavs are alinging with the Hans to construct a powerful Eurasian coalition. If Modi looks beyond the love-hate relationship with the Anglo-Americans and stops clinging to the Slavs, he might find the European alliances at once valuable and inviting.



Tue, 30 May, 2017

No compromise with Pak: Rajnath Singh

Union home minister Rajnath Singh asserted that the government would get the solution of the Kashmir problem and no compromise would be made with Pakistan. "Kashmir is ours and so are the Kashmiris," he said. Singh was here in a program during which he counted upon the achievements of the Modi government during its past three years of rule. Speaking to a gathering at the Subharti University on Monday evening home minister Rajnath Singh highlighted the achievements of the Modi government and averred that they would also find the solution of the Kashmir issue.

"We will find the solution to the Kashmir issue , Kashmir is ours and so are the Kashmiris," said Singh adding that there are certain forces which are trying to misguide the Kashmiri youths but this will not happen no. He also attacked Pakistan and said that befitting reply would be given to their unholy activities. "There would be no compromise," he quipped. The focus of the speech of the home minister was on the achievements of the three years of NDA government at the Centre.

"Three years ago nobody had thought the BJP would come to power with a clear majority. When we voted to power, we had to prove ourselves and meet the expectations of the people . I am glad we have successfully been able to meet their expectations," he said "Allegations will continue to be levelled against us, however, it cannot be denied that if there has been a leader who with the agenda of development travelled widely overseas and has been accepted it has only been India's son Narendra Bhai Modi," said the home minister. Taking a dig a the Opposition, Singh said, "The situation of UP during the SP, BSP rule was dismal.

The previuos government at the Centre were involved into several corrution cases. But no one can make any allegations of corruption on our government," he said. Attacking Congress youth president Rahul Gandhi the home minister said, "No one can become an angry young man by wearing a Kurta with a torn pocket." On questions of the effect of demonetisation, the home minister said, the GDP has increased after the note banmove. "The black money outside the country would be confiscated and also the illegitimate property and black money of people in the country," he asserted . Counting upon the achievements of the Modi government the home minister said that it would take 3-4 hours to tell about all the work done so far.

By the year 2022 the income of the people would be doubled, he claimed and said that LED bulbs of Rs 2115 crores would be distributed across the country which would result in saving of Rs 50 crore. Singh also

highlighted some of the popular programs of the Modi government viz Ujjwala Yojna, Beema Surakhsha Yojna , Jandhan Yojna and also talked about the structural and procedural reforms of the Modi government.



Tue, 30 May, 2017

Pak rethinking on Saudi-led alliance

The move is to avoid further straining its relationship with neighbouring Iran

Pakistan is taking a relook at its position on the Saudi-backed 41-nation Islamic military alliance to be led by its former Army chief Gen Raheel Sharif to avoid further straining its relationship with neighbouring Iran, according to a media report today.

The Express Tribune reported that Pakistan has decided to follow clear redlines in joining the alliance first announced by Saudi Arabia in 2015. Its decision comes after statements by Saudi authorities at the Arab Islamic-US summit in Riyadh on May 20- 21 suggested that the military alliance was meant primarily to counter Iran - a regional rival of Saudi Arabia.

The Riyadh summit focused on isolating Iran - which was kept out of the summit - and countering terrorism in the Middle East. Pakistani officials insisted that the Pakistan government in-principle agreed to be a part of the initiative if its sole purpose was to fight terrorism. It was believed that the government had joined the alliance when in April it green- lighted Gen Sharif to leave Pakistan to lead the alliance. But the officials said a final decision will be made once the terms of reference (ToRs) of the alliance are finalised. The ToRs would be finalised during a meeting of the defence ministers of the participating countries in Saudi Arabia soon.

A senior official familiar with the development told the daily that Pakistan would present its set of proposals during the meeting. Pakistan, according to the official, would recommend that the military alliance should have clear objective, that is to fight terrorism. Any deviation from this goal, he added, will not only undermine the alliance but lead to more divisions in the Muslim world.

“We are very clear that we will join this alliance only to fight terrorism,” the official emphasised. Foreign Office spokesman Nafees Zakaria has also indicated that Pakistan was yet to take a final decision. “What we need to understand is that the Terms of Reference of the alliance are yet to be finalised.

The defence ministers of the participating countries will meet and discuss the modalities of the coalition. We must wait until we have all the information to comment on its outcome. We shouldn't indulge in speculations,” Zakaria said in one of his briefings.

The Pakistan government has already given a public commitment that it would not become part of any initiative whose aim is to target any other Islamic country, including Iran. Defence Minister Khawaja Asif on the floor of the National Assembly has said that Pakistan would withdraw from the alliance if it turns out to be sectarian in nature. Even Gen Sharif had reportedly told the Saudis that he would lead the grouping only if its main purpose was to fight terrorism and not aimed at any other Islamic country.

To avoid any strain in its ties with Iran, Pakistan had pushed for mediation between Tehran and Riyadh. Islamabad even mooted the idea of inclusion of Iran in the military alliance. However, those efforts could not succeed since Saudi Arabia and Iran have serious differences on regional disputes, particularly the current hotspots in the Middle East.

Pakistan's main opposition parties Tehreek-i-Insaf and Pakistan Peoples Party have been calling for maintaining “neutrality” in the Arab-Iran rivalry. But given the longstanding strategic ties with Saudi Arabia, Pakistan is unlikely to completely withdraw from the alliance. Nonetheless, officials stressed, Pakistan's participation would remain confined to counter-terrorism efforts.

China cautions India over building infrastructure in Arunachal Pradesh

Beijing: China on Monday asked India to be “cautious” and exercise “restraint” over building infrastructure in Arunachal Pradesh, days after Prime Narendra Modi launched the country’s longest bridge linking Assam with the state claimed by Beijing.

“We hope India adopts a cautious and restrained attitude on the issue before the final settlement of the border issue with China to jointly control disputes, safeguard peace and tranquility in the border areas,” the Chinese Foreign Ministry said.

“China’s position on the eastern section of the Sino-Indian border areas is consistent and clear,” a statement in Chinese said. PM last week opened India’s longest bridge over Brahmaputra river that connects Assam’s easternmost region with Arunachal Pradesh. “China and India should resolve territorial disputes through negotiations and consultations between the two countries,” the Foreign Ministry said. China and India have a dragging border dispute. The 9.2 km Dhola-Sadiya bridge will cut the distance and travel time between Assam and Arunachal Pradesh by 165 km and five hours.



Tue, 30 May, 2017

N. Korea fires Scud missile into sea

Japan lodges a protest after the missile appeared to have landed in its exclusive economic zone

North Korea fired at least one short-range ballistic missile on Monday that landed in the sea off its east coast, the latest in a fast-paced series of missile tests defying world pressure and threats of more sanctions.

The missile was believed to be a Scud-class ballistic missile and flew about 450 km, South Korean officials said. North Korea has a large stockpile of the short-range missiles, originally developed by the Soviet Union.

Monday's launch followed two successful tests of medium-to-long-range missiles in as many weeks by the North, which has been conducting such tests at an unprecedented pace in an effort to develop an intercontinental ballistic missile (ICBM) capable of hitting the mainland United States.

North Korea was likely showing its determination to push ahead in the face of international pressure to rein in its missile programme and “to pressure the [South Korean] government to change its policy on the North,” South Korea’s Joint Chiefs of Staff spokesman Roh Jae-cheon said.

It was the third ballistic missile test launch since South Korea’s liberal President Moon Jae-in took office on May 10 pledging to engage with the reclusive neighbour in dialogue. Mr. Moon says sanctions alone have failed to resolve the growing threat from the North's advancing nuclear and missile programme.

U.S. aggression - The missile reached an altitude of 120 km, Mr. Roh said. “The assessment is there was at least one missile but we are analysing the number of missiles.”

North Korea, which has conducted dozens of missile tests and tested two nuclear bombs since the beginning of 2016 in defiance of U.N. Security Council resolutions, says the programme is necessary to counter U.S. aggression. The White House said President Donald Trump had been briefed about the launch. The U.S. Pacific Command said it tracked what appeared to be a shortrange ballistic missile for six minutes and assessed it did not pose a threat to North America. The United States has said it was looking at discussing with China a new U.N. Security Council resolution and that Beijing, North Korea’s main diplomatically and

neighbour, realises time was limited to rein in its weapons programme through negotiations. Mr. Trump portrayed the missile test as an affront to China in a morning post on Twitter. “North Korea has shown great disrespect for their neighbour, China, by shooting off yet another ballistic missile... but China is trying hard!” he wrote.

Bleak scenario - U.S. Defence Secretary Jim Mattis, asked what a military conflict with North Korea might look like if diplomacy failed, warned on Sunday it would be “probably the worst kind of fighting in most people’s lifetimes”. “The North Korean regime has hundreds of artillery cannons and rocket launchers within range of one of the most densely populated cities on Earth, which is the capital of South Korea,” Mr. Mattis told CBS news programme “Face the Nation”. “And in the event of war, they would bring danger to China and to Russia as well,” he said.

China reiterated that U.N. Security Council resolutions had “clear rules” about North Korean missile activities and it urged Pyongyang not to contravene them. “The situation on the Korean peninsula is complex and sensitive, and we hope all relevant sides maintain calm and exercise restraint, ease the tense situation as soon as possible and put the issue back onto the correct track of peaceful dialogue,” China's Foreign Ministry said in a statement. Russia condemned the launch and also called for restraint, “including towards military activity”, from the partners it was working with, the RIA news agency quoted a deputy Russian Foreign Minister as saying. Japan lodged a protest against the test missile, which appeared to have landed in its exclusive economic zone. Japanese Prime Minister Shinzo Abe vowed action along with other nations to deter Pyongyang’s repeated provocations.

“As we agreed at the recent G7, the issue of North Korea is a top priority for the international community,” Mr. Abe told reporters in brief televised remarks. “Working with the United States, we will take specific action to deter North Korea.” Seoul’s new administration has said Pyongyang’s repeated test launches were dashing hopes for peace in the Korean peninsula.

THE ASIAN AGE

Tue, 30 May, 2017

New NASA tech to help drones land safely

The software links on-board drone components like batteries and motors to monitor their health.

NASA scientists have developed a new software that will help drones automatically spot the best places to crash-land in case of an emergency, without hurting anyone on the ground.

Increasing numbers of drones in the sky raises the risk to people and property below being hit when these unmanned aerial vehicles develop mechanical problems. Now, Patricia Glaab, an aerospace technologist at NASA Langley Research Centre in the US, and colleagues have developed a crash-landing software for drones.

During eight test flights, the technology successfully spotted safer landing sites such as swamps or drainage ditches to crash instead of cars or people on the ground, Glaab said.

The software links on-board drone components like batteries and motors to monitor their health, 'Fortune.com' reported. The technology identifies when something on the drone goes wrong, and puts the aerial vehicles in a crash-landing mode.

When triggered, the software checks a pre-installed database of nearby safe zones that it can then pilot itself towards. The software also incorporates technology that lets drones recognise and avoid objects on the ground using on-board cameras, Glaab said.

Businesses increasingly use drones for things like inspecting rooftops or power lines, raising the risk of in-flight mechanical and software problems that could put people below in danger.

INDIA'S BIGGEST ROCKET IS HERE

An indigenous rocket as heavy as 200 full-grown Asian elephants to be launched on June 5 could one day take Indians into space from Indian soil. A snapshot:

JOINING THE BIG BOY'S CLUB

Standing tall on the rocket port at Sriharikota in Andhra Pradesh is the country's latest rocket called the Geosynchronous Satellite Launch Vehicle Mark III (GSLV Mk-III), the heaviest rocket ever made by India that is capable of carrying the heaviest satellites till now. If the human venture materialises, India would become only the fourth country after Russia, the US and China to have a human space flight programme

KEY NUMBERS

640 tons

or almost 5 times the weight of a fully loaded Jumbo Jet airplane is the weight of the rocket to reach the launch pad

43 metres

is the height of the GSLV-Mk III, making it the shortest of the three big Indian rockets, but it carries a huge punch as it weighs almost 1.5 times India's next biggest rocket

15 years

is what it took scientists to master the technology of this engine that uses liquid oxygen and liquid hydrogen as propellants and is being tested on a functional rocket

8 tons

is what the heavy-lift rocket is capable of placing in a low Earth orbit, enough to carry India's crew module

₹300 cr

is the estimated cost of the new rocket

■ The GSLV-Mk III-D1 being moved to its launch pad ISRO



▶ We are pushing ourselves to the limits to ensure that this new fully self-reliant Indian rocket succeeds in its maiden launch. In principle, it will be the GSLV Mk-3 or its variant that will be human rated in future AS KIRAN KUMAR, ISRO chairman

GM mustard: A contrary view

By Govind Bhattaharjee

Mr. Bharat Dogra's article "Now, a threat from GM mustard" (The Statesman, 28 May) presents one side of the argument and quotes facts only in support of that argument. But there is another side and the issue remains far from settled. While the fear of corporatisation of agriculture, or health and safety concerns highlighted by him may be true, despite the fact that WHO has certified GM crops as perfectly safe, the Government's think tank, the Niti Aayog has strongly advocated the use of GM seeds. "Elsewhere in the world, most notably the United States, GM seeds have been in use for over two decades with no adverse effect on either crops or those consuming the product of those seeds", it said.

More than half the 28 countries in the European Union, including Germany, France, Italy, Austria, Greece, Hungary, Latvia, Lithuania and Poland have decided to ban their farmers from growing genetically modified crops, while allowing import of GM fodder mainly from South and North America, where 90 per cent of the soya bean crop is GM, as their farmers depend on these imports for feeding livestock. Only one GM crop has been approved in Europe – European corn borer, a type of maize with in-built resistance to a weevil grown primarily in Spain where weevils are a serious problem.

Currently, Bt-Cotton introduced in 2002 remains the only commercially cultivated GM crop in the country. In fact, India has the fifth largest area (with 10.8 million hectares) planted under GM crops, after USA, Brazil, Argentina and Canada. Bt has a built-in organic pesticide which has by and large reduced the use of insecticide spraying on many crops across the world, but the technology remains to be perfected and probably needs more research.

As Bt-cotton, supposed to be immune to pests, has shown, it can also attract new pests as it did in 2015 in Punjab, attracting white-fly that affected over 95 per cent of Bt-cotton crops. Farmers had to suffer huge losses in 2015, leading to over a dozen farmer suicides. But save such incidents, Bt-Cotton has been cited as a success story in India. As per the International Food Policy Research Institute data, between 2002 and 2013, area under cultivation of Bt-cotton in India increased by 53 per cent, yield by 75 per cent and production by 272 per cent. While exports increased from zero to 10 million bales, import remained constant at 2 million bales. Activists' argument that farmers' wealth is being transferred abroad through GM seeds is only partially true, because farmers wouldn't buy these seeds if they were not profitable.

According to a report released by the US National Academy of Sciences in May 2016, GM crops are as safe to eat as their non-GE counterparts; they have no adverse environmental impacts, and they also reduce the use of pesticides. However, it found no significant evidence of increase in the crops' potential yields just on account of use of GM seeds. The report acknowledges that beyond safety, other issues need to be addressed, including earning public trust. It recommends a more transparent and inclusive conversation with the public about GM crops, which has altogether been missing.

But the larger issue is that we live in an age driven by technology whose benefits can be denied only with the abandonment of reason. Technology alone can solve our problems of hunger by increasing productivity and yield. There cannot be any dispute that Indian agriculture needs a tremendous boost in yield which cannot come without biotechnology.

All crops including vegetables and herbs have evolved over millennia of nature's experimentation. No vegetable or herb has evolved purely for altruistic purposes for consumption by animals or humans or to serve as a link in the food chain. Every living species has developed some defence mechanism against predation, for the plants this mechanism translates into some form of toxicity that deter their most natural eaters and pests.

As Harvard scientist Pinker says in his book 'The Blank Slate: The Modern Denial of Human Nature', "Plants are Darwinian creatures with no particular desire to be eaten, so that they did not go out of their way to be tasty, healthy, or easy for us to grow and harvest. On the contrary they did go out of their way to deter us from eating them, by evolving irritants, toxins and bitter tasting compounds."

Genetically modified foods cannot be more dangerous than natural foods, because they are not fundamentally different. Mutation is a fact of all life, and virtually every vegetable or animal has been genetically modified through millennia of evolution, and through selective breeding and hybridization ever since we have learnt agriculture some 12,000 years ago. There are many examples of this in nature. The wild ancestor of carrots was a thin, bitter white root, not the sweet, long, orange-coloured vegetable we eat today. The ancestor of corn had an inch long cob with a few small, rock hard kernels, barely edible. The ancient ancestor of the modern banana was the *Musa acuminata*, a plant that had small okra like pods, not the nutrient-rich bright yellow fruits we love. A 17th-century painting by Giovanni Stanchi shows a watermelon we would not recognize today, having swirly shapes at the centre and divided into six separate sections - very unlike the red, fleshy centre of modern watermelons. The early ancestor of the eggplant was orange-like in shape with spines. But selective breeding has gotten rid of the spines and given us the vegetable of today. These are all genetically modified vegetables, much richer in taste and nutrition than their 'natural' ancestors.

Since ages, farmers have been practicing selective breeding by deliberate crossbreeding among closely related varieties of plants to produce new varieties with desirable properties, in the process transporting genes from one variety into another, by choosing the properties we want in plants. In GM crops, the DNAs are artificially altered by introducing genes from a completely different species, unlike from closely related species as in selective breeding, in order to boost the plant's resistance to pests or herbicides or for higher yield. Even selective breeding is not without hazards.

Every plant produces toxins as its natural defence, and farmers will naturally prefer those with greater disease or pest resistance and crossbreed them. This selective breeding will only increase the concentration of the plant's own poisons and will ultimately result in dangerously hazardous foods. The effect of elevation of toxins in them may not even be noticed till people actually start getting ill from their consumption. A variety of potato thus developed called Lenape potato had to be withdrawn from the market because of its toxicity. Similarly natural flavours, indistinguishable from their artificial counterparts, may often be more harmful than the latter. When natural almond flavour benzaldehyde is derived from peach pits, it has traces of cyanides; when synthesised in the laboratory, it has none.

Fear against GM food arises partly out of ignorance and partly out of unfounded fear against traditional beliefs, what Pinker calls "intuitive essentialism". Traditional faith believes that every living thing has a pure essence, and natural foods carry that pure essence to rejuvenate us and protect us against sickness. Anything engineered by humans will destroy that essence. Going by that argument, every process can be seen as destroying the essence of nature.

Mr Dogra has quoted a few instances of unsuccessful application of genetic engineering. Apart from conception, success of any technological experiment depends on the choice of techniques, their correct application and proper control of the experiment. Failure in either of these may lead to a failed experiment, but that does not necessarily prove incorrectness of the conception.

With increasing populations and decreasing areas of cultivable land, increasing yield and productivity is essential for solving the problem of food, and biotech seeds can help address these problems in sustainable manner, boosting rural incomes and quality of life for farmers. By opposing GM technology, the activists may actually be harming the interests of the very people they seek to represent. We should not mix science with politics, but insist instead on stringent regulations like those in US or Brazil, side by side with greater transparency, evidence and investments in R&D.