

समाचार पत्रों से चयित अंश Newspapers Clippings

दैनिक सामयिक अभिज्ञता सेवा

A Daily Current Awareness Service



रक्षा विज्ञान पुस्तकालय
Defence Science Library
रक्षा वैज्ञानिक सूचना एवं प्रलेखन केन्द्र
Defence Scientific Information & Documentation Centre
मेटकॉफ हाऊस, दिल्ली 110054
Metcalf House, Delhi-110054

‘Rafale deal could be concluded in June itself’

Manohar Parrikar reluctantly gave up Goa's chief ministership to become the country's defence minister in November 2014, six months after the Modi-led NDA government assumed office. Since then, he has been busy overhauling the defence establishment, the 61-year-old IITian tells Rajat Pandit. Excerpts:

What changes have you ushered into the gigantic defence ministry?

The major change is the change in attitude in looking and dealing with different issues. There is more openness, more trust, more confidence, and the mindset to deliver, which was missing earlier. Things are now moving positively. On the welfare side, ex-servicemen have got the one rank, one pension scheme. There is also much faster handling of their grievances.

Then, the exercise to improve the teeth-to-tail ratio in the armed forces is under way. The aim is to improve combat power, while cutting down non-operational flab and old, unwanted things to reduce revenue expenditure. The Shekatkar committee should present its first round of recommendations by July. So, I expect all this to begin from August.

But what about the urgently needed defence reforms, including creation of a Chief of Defence Staff (CDS) post and unified structures to promote synergy among the Army, Navy and IAF?

CDS, jointness and reforms in basic structures are all inter-linked. We are working on them seriously. If these issues were not resolved for 16 years, I think I can take a few more months. A CDS without jointness has no meaning. It requires a proper action plan for implementation over 7-8 years, it can't be done overnight.

The much-delayed modernisation of armed forces is yet to pick up?

We have finalised the defence procurement procedure (DPP)2016 to speed up the earlier processes. Acquisition proposals under the new DPP have already begun. The impact will be seen next year.

When this government came to power, there were 388 AoNs (acceptances of necessity or initial approvals for modernisation projects) worth around Rs 5.5 lakh crore. Since then, we have given approval for another 110 AoNs worth Rs 2.5 lakh crore. But we have reduced the total number to 280 AoNs because we speeded up the processes and weeded out what was not required. Around Rs 1.5 lakh crore worth of projects have been ordered already. In the current fiscal, I intend to clear projects worth another Rs 1.5 lakh crore.

The estimated 7.8 billion euros (Rs 59,500 crore) deal for the 36 French Rafale fighters is still stuck despite it being over a year since the Modi-Hollande summit in Paris announced it.

Some loose ends have to be tied up. I am out for eight days from next week. After I return, I hope to conclude it. There is no reason why it should not be concluded in June itself.

But France is refusing to give sovereign guarantee or bank guarantee for the deal. What about the cost?

All issues will be addressed in the inter-governmental agreement (IGA) to be inked. The IGA will cover everything, including the guarantee. It will ensure that anything covered under it has to be executed by the two governments.

As for the overall price, I would not like to number-crunch at this stage.

The figure will depend on the cost of the fighters, the cost of India-specific requirements, and the performance-based maintenance contract we want. Then, there are armaments like missiles and bombs.

J&K seems headed for a 'hot' summer with a spike in infiltration. Is there any change in Pakistan's support for cross-border terrorism? What's your assessment?

I don't want to say anything about Pakistan's attitude or the number of terror-training camps on its soil at this stage. But yes, infiltration attempts are increasing. But our counter-insurgency strategy is yielding results. During the current year till May 22-23, we lost nine security forces personnel but managed to eliminate 44 terrorists. There is another aspect to it. There is an attempt to flare up local sentiments in some areas. This is a new phenomenon which needs to be addressed by the local state administration. It's not for the Army to react to it.

The PM is going to US on June 7. Will the bilateral Logistics Exchange Memorandum of Agreement be inked during the visit?

There is criticism it will give basing rights to the US military in India.

We are trying to finalise the logistics pact as soon as possible. But the process is not yet complete. Apart from MoD, the document needs to be vetted by the MEA. It's a two-way process, with modifications being done by both sides. It goes up and down. Those being critical of it can see it after it is finalised. There is no point in putting the cart before the horse. There is no such issue (basing rights) at all. It's only about giving food, fuel and water, and that too for non-operational purposes.

दैनिक जागरण

27 मई, 2016

कश्मीर में सेना के लिए अफस्पा जरूरी: पर्रिकर

नई दिल्ली - शालीन और मृदुभाषी मनोहर पर्रिकर को भी रक्षा मंत्रालय में लगभग डेढ़ साल हो गए हैं। इस बीच उनमें भी कुछ बदलाव देखे जा सकते हैं। सीधे साधे पर्रिकर से पाकिस्तान की बात कीजिए तो खरे खरे शब्दों में कहेंगे- जाकर सीमा पर देखिए हम क्या कर रहे हैं। शालीन और संयत पर सख्त। दैनिक जागरण से उन्होंने रक्षा से जुड़े कई मुद्दों पर चर्चा की। उसके कुछ अंश:

जम्मू-कश्मीर सरकार में आपकी सहयोगी पार्टी पीडीपी चाहती है कि सेना को विशेषाधिकार देने वाला अफस्पा कानून हटाया जाए।

यह सवाल आपको राजनाथ सिंह जी से पूछना चाहिए। मेरे मंत्रालय की भूमिका तब शुरू होती है जब सेना को आगे बढ़ कर किसी खास क्षेत्र में कार्रवाई करने को कहा जाता है। ऐसे समय में सेना को अफस्पा के तहत सुरक्षा चाहिए होती है। अगर यह कानून नहीं रहेगा तो सेना वहां कार्रवाई नहीं कर पाएगी। आतंकवाद रोधी आपरेशन में सेना की ताकत लगती है वह ताकत ऐसे अलग-अलग कानूनों से आती है। उसमें अफस्पा प्रमुख है। वह नहीं रहेगी तो सेना नागरिक इलाकों में आपरेशन के लिए नहीं जाएगी। इस लिहाज से गृह मंत्रालय को लेखा-जोखा करना है। यह फैसला मैं नहीं करता। इसका जवाब गृह मंत्रालय ही दे सकता है। अगर सेना की जरूरत है तो यह कानून रखना होगा, वरना सेना वहां काम नहीं कर सकती। जवानों को स्टैंडर्ड कानूनों का सामना करने के लिए नहीं कहा जा सकता।

क्या आपको लगता है कि राफेल सौदा जल्दी तय हो पाएगा?

जो कुछ होगा वह कानूनी ढांचे के तहत ही होगा। जो कमेटी इस पर बातचीत कर रही है, मैं उसके काम में दखल नहीं देना चाहता। मैंने कहा कि वे चर्चा कर के रिपोर्ट मुझे दें कि उसका नतीजा क्या रहा।

वायु सेना प्रमुख ने कहा है कि चीन और पाकिस्तान से एक साथ हमला हो जाए तो हम इस स्थिति में नहीं हैं कि मुकाबला कर सकें..

वो सवाल आपको उन्हें ही पूछना चाहिए था। मैंने उनसे पूछा तो उन्होंने कहा कि मैंने इस लिहाज से नहीं कहा था। अलग कारण के लिए बोला था। खैर, इतना ही कहूंगा कि आपके मन में इच्छा दस हजार की भी हो सकती है। पर्याप्त रूप से मुहैया करवाना और बहुत ज्यादा उपलब्ध करवाना, इसमें फर्क है। मुझे लगता है कि पर्याप्त रूप से मुहैया करवाने की जरूरत है। सरकार इसके लिए काम कर रही है। बेड़े में मिग 21 जैसे छोटे लड़ाकू जहाज की जगह एलसीए तेजस जो उनसे दो-तीन गुना अच्छे हैं उन्हें शामिल किया जा रहा है। मिग 29 की आयु अभी बाकी है। मिग 21 विमानों का समय अगले वर्ष से एक-एक कर के खत्म होता जाएगा। उसकी जगह तेजस आ रहा है। इस साल चार-पांच आ जाएंगे। अगले साल 12 होंगे, उसके बाद 16-16 आ जाएंगे। दो-तीन साल में मिग की कमी और तेजस की आपूर्ति बराबर हो जाएगी। तब तक सुखोई के तीन और बेड़े आ रहे हैं। इस दौरान अगर जून-जुलाई में राफेल पूरा हो जाता है तो तीन साल में राफेल इंडक्ट हो जाएंगे। मुझे लगता है कि हम बैलेंस बनाने की कोशिश कर रहे हैं। दुनिया में लड़ाई के तरीके बदलते रहते हैं। फायटर प्लेन एक खास समय के लिए बहुत अच्छे थे। आज आप फायटर प्लेन की क्षमता में मिसाइल सिस्टम से बढ़ा सकते हैं।

क्या आपको लगता है कि कंपनियों की ब्लैकलिस्टिंग से..

हमारे जमाने में कोई ब्लैकलिस्ट नहीं होगी। कोई चांस ही नहीं है। क्योंकि चोरी ही नहीं करने देंगे तो इसकी चिंता क्यों करनी।

आप लोग विपक्ष में थे तो कहते थे कि सत्ता में आने पर पाकिस्तान को करारा जवाब देंगे। क्या वह स्थिति आ सकी है?

पाकिस्तान सीमा पर जा कर देखिए पता चल जाएगा कि हम क्या कर रहे हैं। वर्ष 2014 के दौरान जरूर सीमा उल्लंघन के मामले बढ़े थे। लेकिन जब उनको सही तरीके से जवाब दिया गया तो इसमें काफी कमी आई है। जो तथ्य हैं, उनसे मैं इंकार नहीं कर रहा, लेकिन आज जो आरोप लगा रहे हैं, उनके जमाने में भी होता था।

सीमा उल्लंघन को ले कर इस सरकार की नीति क्या है?

हमारी नीति बिल्कुल साफ है। हम खुद अपनी तरफ से कुछ नहीं करेंगे। लेकिन दूसरे ने कोशिश भी की तो उसे छोड़ेंगे भी नहीं।

आपने पठानकोट हमले के बाद एक बार कहा था कि जो हमें दर्द दे रहा है, उसे भी दर्द देंगे। क्या हम पाकिस्तान के अंदर घुस कर सर्जिकल स्ट्राइक को तैयार हैं?

ऐसी बातें कह कर की जाती हैं क्या?

गोवा में चुनाव होने जा रहे हैं, आपने लंबे समय तक वहां अच्छा प्रशासन दिया। क्या आपको लगता है कि वहां दुबारा जाने की जरूरत है?

चुनाव के लिए जरूर जाऊंगा।

The Tribune
27 May, 2016

Lt Gen KJ Singh exhorts students to join armed forces

In a bid to inspire students from elite public schools to join the armed forces in view of their declining interest towards this profession, Lt Gen KJ Singh, General Officer Commanding in Chief (GOC in C), Western Command, today addressed the students of The Lawrence School at Sanawar and motivated them to choose a career in the armed forces.

Delivering a talk on “Leadership – A Way of Life” in the school, he reminisced his days as a trainee at the National Defence Academy where he came across officers from this school and always looked with awe at Sanawar. He inspired the students to opt for a career in the armed forces, which helped in bringing out the cutting edge leadership in an individual.

He said, “It is the leadership packaged into a concept called management, which has evolved as an important tool of running corporate sectors in today’s world.”

Delving into the essence of the Indian Army, he described it as a secular and apolitical entity, which was living and fighting for the name of the battalion (naam), owing allegiance (namak) to the nation while upholding its honour (flag or Nishaan).

He said, “The officers laying down their lives are far more in the Indian Army than other armies, as we are trained to lead from the front.” As future leaders, administrators and business tycoons of the country, he urged the students to employ the soldiers who superannuate at a young age for their sense of loyalty and discipline.

He said, “You cannot fool the world, your character should be strong and only then will you be followed by the people. He advised the students to be proactive and realise their aims. He said they should inculcate various qualities like a strong will-power, physical and moral courage, quick decision making, human-relation skills, tolerance for ambiguity, wisdom and vision, equanimity, team-building and apt management skills.

He compared the Army to a mobile with dual SIMs of one’s family and regiment, where regiment takes precedence over the family owing to a sense of camaraderie. He concluded his address by saying that “if you want to thank a soldier, be the kind of Indian worth fighting for”.

Headmaster Vinay Pandey gave a memento to the GOC in C as a token of appreciation and gratitude.

Pak Rangers, BSF may meet in Lahore in late July

New Delhi Border guarding forces of India and Pakistan are expected to hold their biannual DG-level talks on issues related to ceasefire violations, infiltration and digging of illegal tunnels along the International Border in July in Lahore. Sources indicated a positive movement on NIA's proposed visit to Pakistan to investigate the Pathankot attack could pave the way for the BSF-Rangers meeting.

While the forces have mutually agreed to hold the talks between July 21 and 24 at the Rangers' headquarters in Lahore, a final call on travel will only be taken by the governments of the two countries.

The last such meeting between the Border Security Force and Pakistan Rangers was held in the Delhi in September last year.

India had sought the visit of an NIA team to Pakistan after a Joint Investigation Team from Pakistan had visited Pathankot early this year. Pakistan has yet to approve the visit.

Officials said though the International Border has been "relatively less volatile" in nearly eight months since the last meeting between the two forces compared to the frequent ceasefire violations in J&K in the early 2015, infiltration and drugs smuggling continue to be a matter of concern.

They said the bi-annual meeting between the two border guarding forces has been already delayed due to a number of bilateral issues.

The Indian side will also raise issues related to smuggling of arms, contraband items and detection of illegal tunnels running across the IB.

"The agenda for the proposed talks is in the making," an officer said. The last time the two sides had met in Delhi it was decided not to fire heavy artillery like mortar shells and ensure that civilians living along the IB were not harmed..

CIC seeks records on Agusta deal

The central information commission (CIC) has sought some records related to the termination of the AgustaWestland deal by the UPA government for its perusal before deciding if the documents can be disclosed to the public or not. It has also directed the defence ministry to disclose some records including the opinion of the attorney general on returning procured choppers and records related to court proceedings in Italy .

"Commission will examine application of Section 8(1) (a) and (h) in claiming exemption from disclosure of files and documents by the CPIO. It will also take a decision, if required on applying severability clause under Section 10 of RTI Act in respect of any portion of the documentfiles," information commissioner Divya Prakash Sinha said.

Hearing the plea of activist Subhash Agrawal, Sinha ordered defence ministry to provide details of bank guarantee amount received back by India. "MoD is directed to provide copy of Attorney General's opinion on sending back already procured helicopters...provide details of court cases in Italian courts in which India is a party," he said.

Examining the application point by point, Sinha ordered the ministry to provide names of Italian advocatesItalian law firms hired to represent India in Italian courts.

Responding to RTI application of Agrawal, who had sought information on various points of the controversial deal for 12 VIP helicopters from AgustaWestland in which allegations of graft have surfaced, defence ministry has cited ongoing CBI probe to deny the information.

“CPIO stated that the CBI probe in connection with the alleged scam relating to chopper deal is still continuing. CBI has time and again advised MoD that disclosure of any information related to this case will impede the process of investigation and disclosure of the same is exempt under section 8(1)(h),“ Sinha noted.

The Hindu
27 May, 2016

Kickbacks doubled VVIP chopper prices: Manohar Parrikar

The VVIP helicopters bought in 2010 for over Rs. 300 crore a piece could have been procured for Rs. 160 crore each, Defence Minister Manohar Parrikar told *The Hindu* on Thursday, claiming that kickbacks had been a significant part of acquisition costs in the defence sector. “The current government’s success has been in lowering the prices in many cases. Bargains, reductions and obviously one major issue of third party interventions,” he claimed, expressing satisfaction over the Modi government’s achievements in the defence sector.

The Minister also spelt out plans to invite a foreign manufacturer to partner an Indian firm to make a twin engine fighter aircraft under ‘Make in India’. “We can get the Army and the Air Force modernised without much pressure on the funds,” he said. In a freewheeling interview to *The Hindu*, he also spoke about additional fighter jets for the Air Force, the appointment of the Chief of the Defence Staff and ties with China. Excerpts:

How do you look back at the past two years? Are you happy or still struggling with the systems and bureaucracy?

Looking back at the two years of the Narendra Modi government, I am very happy to say that what we pushed for, we have managed to achieve to a large extent. Now if you ask me whether I am happy, a person should not be happy with what he has done. So I would prefer to push still faster and still better.

What is the biggest challenge you face as the Minister?

In this department, the biggest challenge was the mindset created by my predecessor, Mr. A.K. Antony. He created a total shut mindset where no decisions were being encouraged at all. When people take decisions, their decision-making ability improves. When they don’t, they find every reason not to take a decision.

You are known to be an engineer and mostly relaxed. In a Ministry like defence where big money and big power operate, does that attitude work?

He [Mr. Antony] never took decisions until there were pressures, pulls or calls. In spite of the shortage of staff, we are pushing our procurement deals pretty well. If you check up Mr. Antony’s record, he procured items which are government-to-government (G-to-G) offers, P-8I, C-130, C-17. On free market procurement, he could hardly push anything.

You also inherited massive committed liabilities for contracts signed during the UPA regime, as well as pending contracts such as the MMRCA, now Rafale. All of these do not give you much leeway to make a dramatic shift to indigenous procurement?

I don’t have a problem with that. I got these people to give projections of their requirements, tentatively what will be the funds available, what are the shortages because of this, the committed liabilities of the three Services, details of projections, annual statements etc. Based on this, I can tell you this much, if the current trend continues we can get the Army and the Air Force modernised

without much pressure on the funds. One major important issue I would like to highlight, which is the current government's success, has been lowering the prices in many cases. Bargain, reductions, obviously one major issue is of third party intervention ...

Can you give a specific instance where you are happy with what you have achieved?

There are cases where cost is way down than what was anticipated. Rafale, we will definitely get lower prices. In many cases we managed to negotiate and bring the prices down. In some cases, in spite of 5-6 years' delay we are able to hold the prices.

Have you done a ballpark assessment of how much does corruption eat up in a defence deal?

I will not say that but people are aware that kickbacks are substantial. You take the case of AgustaWestland, I believe, after consultations with services and many retired people who have the knowledge as also the proposals of similar helicopters which we handle, the price in 2010 should have been nothing more than Rs. 160-170 crore. We ended up paying over Rs. 300 crore.

When do you hope to sign the Rafale fighter deal?

I cannot say that. I can tell you that the last knots are being tied.

You indicated a second twin engine fighter. Are we going to invite a foreign company to assemble in India or are we looking at developing our own?

I am not looking for assembly at all. I am looking for a company to join with Indian partner and to start manufacturing here by Transfer of Technology (ToT) in most of the items. I know that 100 per cent ToT may not be possible and 100 per cent indigenisation is not possible. Even with so many efforts, LCA has only around 40 per cent indigenisation.

Have you identified the proposed twin engine fighter to be made in India?

The process is under way but that will fructify only after we complete Rafale deal.

Have you faced any kind of pressure here or efforts to influence you?

Those who know won't even come near me, those who don't know will get my taste in the first instance. When I became Defence Minister, a few people made a vague attempt, not an attempt which can be quoted with name, but indirect hints to my son who told him very clearly that he talks with his father only personal and family problems. He just told them that 'this is his email, please send an email'.

You have been very vocal about the appointment of the Chief of the Defence Staff (CDS). Why is it stuck?

It is under discussion because we realised CDS means there is a concept of jointness. Simultaneously we want to improve the teeth-to-tail ratio. All these three things have to be dealt with on a common platform. They cannot be dealt with in a piecemeal manner. We have started all three exercises. After maybe two or three months, we can start implementing.

We have seen a significant strategy with respect to China in the region. Can you elaborate on our military posture in the coming years?

I don't think we require a military posture with China. I think we need to sit and talk and finish off the issues. Both are big nations, big economies of Asia, why cannot we build up relations which were 1,500 years old, except for 1962, and sort out our problem ourselves. So, more interaction is required, which the Chinese have also gave clear indication. On the border, to avoid any problem, two more border meeting points have been added, and we may add a few more. Hotline draft

agreement is in final stages. The President is now in China. So if we meet often, problems are resolved.

The Economic Times
27 May, 2016

No Need for India to be Party to Appeal in AgustaWestland Case

Defence minister says Italy torpedoed India's bid to enter Missile Control Regime but hopes nation will become a hub for missile exports soon

India has the potential of developing into a hub for missile exports, says defence minister Manohar Parrikar, Italy's move to torpedo India's move to enter the multilateral Missile Technology Control Regime (MTCR) notwithstanding. In an interview to Manu Pubby, he talks about his vision for private sector participation in defence, the blacklisting policy and the fallout of the AgustaWestland VVIP chopper scam. Edited excerpts:

Will India be party to the appeal likely to be filed in the AgustaWestland VVIP chopper case in the apex court in Italy, unlike the appeals court process in which the country stayed out?

There is no need for India to be party to the case. In the past, we were just a civil party to a case of criminal prosecution by the Italian authorities. We have got our work done; we have got access to all documents. Now there is a fight there on other legal points. Why should we be part of that? There is no reason for us to be part of the appeal. Corruption has happened and on the advice of the AG (Attorney General) we had participated as a civil party and managed to get all documents. After that it remains in their courts and we have no reason to pursue. So, the AG's advice was not to continue (the appeal). It is an unnecessary spending of money. We could not have done anything and would just be observers. It was not required.

The defence ministry has been planning a new policy on blacklisting and agents. Will the AgustaWestland case impact this policy?

This case will have no impact on the policy. This is one of the situations (allegations of bribery or influence) that will be addressed in the policy. The blacklisting policy is not one in which someone steals something and would be let off. Bribery is considered a criminal offence for which the punishment is blacklisting. However, for minor offences for example, a small part of the contract has not been fulfilled like a delivery period that changes from the (required) six months to (a delayed) eight months we will not blacklist a firm. But, for criminal matters and for national security, these are two issues where there is no such choice. There will be no compromise.

We are working to upload the new defence procurement policy on the website in the next five-seven days. After that we will work out the blacklisting policy as well.

A major initiative in the works is a four-star chief of integrated defence staff. How soon is this likely to be finalised?

The decision is very important and is linked to taking a call on jointness (cross-service cooperation) and also on improving the teeth to tail ratio. So these three things are linked to each other. We have formed a committee under Lt Gen Shekatkar (ret'd) that has to give a detailed report in 90 days. In 45-50 days we will get the first report. With that and a call on jointness, we will take a decision as they have an impact on each other. I see no reason why (a decision on the four-star general) should not happen within this calendar year or in the financial year.

Exports have been a bright spot for the defence industry. Do you foresee India as a major export hub for missiles? How do you see Italy's stand to block India in the MTCR?

We have delisted certain products from the defence list and if these are also seen, exports have actually gone up three times. In the Italian case, they have torpedoed our attempt to enter the

MTCR. They have taken a stand against us that I think is not valid. We have taken this up with the external affairs ministry, but even without MTCR we can do exports. India can be a hub for missile exports; we have products like the Brahmos and Akash missile systems. It will not happen overnight and we require several things to be put in place. But yes, we have approved it in principle (missile exports) and now we are working to put together a lot of things that will make it happen.

How do you see the strategic partnership model progressing and how do you respond to charges that inviting private sector for feedback amounts to a conflict of interest?

What is wrong in asking the industry to form groups that will give us their opinion in a combined form? We have not decided on the model yet and this is just an interaction with the industry so that they can tell us how they feel. Once I learn what the industry wants, I can take what I feel is correct, fair, transparent and in the interest of the country. What I don't see as that, I won't take. Conflict of interest comes into picture when I appoint someone to decide on his own selection. I am not doing so. This is just feedback for which the industry has been consulted.

Our target (to complete the strategic partnership process) is by the end of July. Let's see how fast that happens. After that it will need to go to the finance ministry, the legal department and the cabinet. It is a policy decision involving finances. After this mountain there will two or three more also to climb.

One point of concern has been the poor flow of FDI in defence manufacturing. How do you see this influencing Make in India programme?

We actually do not need FDI right now. There is no point in parking money in the banks here. FDI is needed when the factory has to start operating. How can you expect it before that? Right now you have to go on how many MoUs (memorandums of understanding) have been signed between various companies and how many industrial licences have been obtained. These are the two indicators for the defence industry right now. Investments will come when actual orders are received. And actual orders will take another six to 12 months to be placed. For the self-propelled gun project, for example, L&T (the winner) has done its own investments, so there is no problem. But when it comes to the Avro replacement project for which Airbus has signed an MoU with Tata Advanced Systems the money will come in when the contract is actually signed.

The Times of India
27 May, 2016

ED team may go to S'pore on cash trail

By Neeraj Chauhan

A three-member team from Enforcement Directorate is likely to leave for Singapore in an effort to establish the money trail in the AgustaWestland scam.

According to sources, European and Indian middlemen -Carlo Gerosa, Guido Haschke and Gautam Khaitan used a large number of companies for bringing 24.6 million euros (approximately Rs 160 crore) from IDS Tunisia after receiving the same from the Italian subsidiary of Agusta Westland, to India.

One of the companies -Ms Interstellar PTA, based in Singapore was part of the process of routing the bribe money . The agency team, while in Singapore, will check the company records, bank transactions, details of owners directors etc, said officials. The investigators suspect that Interstellar PTA could be linked to Interstellar Technologies, Mauritius, which received the maximum chunk of alleged bribe money -12.40 million euros (Rs 75 crore).

ED has stated that the money was laundered by payments raised on fictitious invoices to companies based in Mauritius like Ms Interstellar Technologies and other firms across the globe. ED has already sent a request seeking to visit Mauritius and other five countries as well.

The probe has revealed that after IDS Tunisia was incorporated, European middlemen Carlo Gerosa and Guido Haschke and Indian lawyer Gautam Khaitan allegedly received 24.6 million euros (approximately Rs 160 crore) from AugustaWestland Spa. Out of this amount, 3.88 million euros (Rs 24.60 crore) was transferred to Aeromatrix Info Solutions Pvt Ltd and 1.88 million euros (Rs 12 crore) to IDS Infotech India against invoices raised by these companies. The remaining amount of approximately 18.94 million euros (Rs 123 crore) was kept by IDS Tunisia.

नई दुनिया

26 मई, 2016

राजनीतिक कुशलता से विवाद निपटाएं भारत और चीन

बीजिंग - भारत और चीन को सीमा समस्या सहित अपने बीच की सभी चुनौतियों को राजनीतिक कुशलता और सभ्य चतुराई से जल्द सुलझाना चाहिए, जिससे आने वाली पीढ़ियां इन उलझे हुए मसलों के बोझ से मुक्त हो सकें।

गुरुवार को यह बात चीन के दौरे पर गए राष्ट्रपति प्रणब मुखर्जी ने पेकिंग विश्वविद्यालय के एक कार्यक्रम में कही।

प्रणब ने कहा, तेज विकास में सहयोग के लिए दोनों देशों के बीच राजनीतिक समझदारी जरूरी है। इसके लिए दोनों देशों के राजनीतिज्ञों के बीच संवाद बढ़ना चाहिए। भारत चीन के साथ अपने संबंधों का विकास चाहता है। हमारे प्रमुख नेताओं का चीन के साथ निरंतर संपर्क इस बात का सुबूत है। दोनों देश अपने मतभेदों को बातचीत के जरिये सुलझा सकते हैं।

राष्ट्रपति के रूप में अपनी पहली चीन यात्रा में प्रणब ने कहा, पड़ोसियों के बीच कुछ बिंदुओं पर मतभेद होना स्वाभाविक है। इसलिए हमें इन्हें बुद्धि और चातुर्य से सुलझाना चाहिए। इसमें दोनों पक्षों को संतोष का एहसास भी होना चाहिए। भरोसा है कि शांतिपूर्ण तरीकों से समस्याओं के निकले हल ज्यादा मजबूत और स्थायी होते हैं।

उल्लेखनीय है कि भारत और चीन के बीच लगभग साढ़े तीन हजार किलोमीटर लंबी सीमा को लेकर विवाद है। चीन का कहना है कि अरुणाचल प्रदेश से लगने वाली लगभग दो हजार किलोमीटर लंबी सीमा विवादित है।

तिब्बत को लेकर भारत और चीन के बीच अलग तरह का विवाद है। सन 1962 के युद्ध में चीन द्वारा अधिकृत अक्साई चिन का भी दोनों देशों के बीच विवाद है। राष्ट्रपति ने विवादों के निदान के लिए आठ चरणों पर आधारित रास्ता बताया। इनमें दोनों देशों के युवाओं के बीच संपर्क बढ़ाना प्रमुख बिंदु है।

अच्छे संबंधों की याद कर मसूदा मामले में दिखाया आइना

राष्ट्रपति प्रणब मुखर्जी ने अपने भाषण में भारत और चीन के प्रगाढ़ संबंधों वाले दिनों को भी याद किया। कहा कि संयुक्त राष्ट्र सुरक्षा परिषद की सदस्यता चीन को दिए जाने का भारत ने समर्थन किया था।

प्रणब ने यह उल्लेख आतंकी संगठन जैश-ए-मुहम्मद सरगना मसूदा अजहर पर प्रतिबंध लगाने के संयुक्त राष्ट्र में भारत के प्रस्ताव को चीन द्वारा रोके जाने के मामले पर किया। प्रणब ने सन 1950 के भारत और चीन के मधुर संबंधों का जिक्र करते हुए बीते सात दशकों में उनमें आई मुश्किलों के बारे में बताया।

The Hindu
27 May, 2016

India, China agree to advance ongoing boundary negotiations

Just before Mr. Mukherjee's visit, Chinese spokespersons had voiced opposition to India joining the NSG without signing the NPT.

Cordial and clear discussions on sensitive issues marked India-China talks on Thursday during President Pranab Mukherjee's visit to Beijing but no significant change in divergent positions was realised.

Meetings with President Xi Jinping, Prime Minister Li Keqiang and National Peoples' Congress chairman Zhang Dejiang marked a busy third day of a four-day visit by Mr. Mukherjee to China.

Just before Mr. Mukherjee's visit, Chinese spokespersons had voiced opposition to India joining the Nuclear Suppliers Group without signing the Nuclear Non-proliferation Treaty (NPT).

Mr. Mukherjee's delegation apprised its Chinese counterparts about India's aims to rapidly expand its civilian nuclear programme in line with the country's energy needs. He also asked Mr. Xi to give this matter "personal attention", said foreign secretary S. Jaishankar.

Cooperation on n-energy

Xiao Qian, Director-General of Asian region in China's ministry of foreign affairs, briefing the press following the meeting also said that the two leaders "agreed to strengthen cooperation in the peaceful uses of nuclear energy".

Mr. Mukherjee led a delegation to meet Mr. Xi after receiving a grand welcome in a ceremony held at the Great Hall of Peace in Beijing.

The two leaders discussed ways to strengthen cooperation in "investment, trade and tourism". Chinese officials also showed interest in India's flagship schemes such as 'Digital India' and 'Make in India' and in possibilities of investment in the Smart Cities project.

Specifically, China has also agreed to accommodate more Indian tourists (seven batches or around 400 people this year) to visit Kailash Mansarovar via the Nathu La pass into Tibet.

The two leaders also agreed to advance the ongoing boundary negotiations under the 'Special Representatives' mechanism, and at the same time resolved to take actions to maintain peace and tranquillity in the boundary regions. Mr. Jaishankar said that the Indian delegation had conveyed to the Chinese the need to eliminate cross-border terrorism.

The specific issue of China's support for sanctions against the Jaish-e-Mohammad leader Masood Azhar was not discussed, Mr Xiao said.

The Economic Times
27 May, 2016

President Pranab Mukherjee in China - Don't Link India's NSG Entry with Pakistan: India to China

By Dipanjan Roy Chaudhury

India has utilised Pranab Mukherjee's maiden visit to China as President to send a message that it should be allowed entry into the Nuclear Suppliers Group (NSG) on the basis of its own credentials and not linked in any way to Pakistan.

China, a member of NSG, has publicly blocked India's entry into the 48-member group apparently at the behest of its ally Pakistan on the grounds that India has not signed the Non-Proliferation Treaty .

Mukherjee on Thursday met top Chinese leaders to discuss a slew of political and strategic issues.

India wants admission to the NSG on the basis of its own impeccable non-proliferation record, people familiar with the matter said.

“NSG membership cannot be linked with NPT...it is linked with International Atomic Energy Agency (IAEA). India has closely cooperated with IAEA,” said one of the persons who did not wish to be identified.

India has said that its case should be judged independently without prejudice or on requests to block it following lobbying from other countries, the person said. In 2008, China was among the last few countries to lift its objection to clean waiver by NSG to India. During American President Barack Obama's visit to India in January 2015, the US had announced that India was ready to join the NSG. This position was reiterated by the US recently.

The Statesman
27 May, 2016

Defence supremo – I

By Ashok Kapur

It is the most persistently aired word in the lexicon of the Indian military. It is almost as old as the Republic and has been kept alive on a military ventilator. A handful of retired soldiers routinely invoke the expression in various public fora, to somehow pressure the political executive into creating a new “post” in the already top-heavy high-rise military hierarchy -- the office of a Military Supremo to proffer single-point advice to the Government for higher defence management.

It is not known if any of these ex-soldiers, even in their cozy parking slots in the studios of the electronic media, has cared to define the expression. It is the first condition of a public debate, as modern military strategy does not define it. The person who will ‘command’ this advice to the Cabinet, on behalf of all the three wings of the military will be some kind of a Supremo, who would be superior to the three Service chiefs.

Some fundamental issues arise against the backdrop of such clamorous chanting. The first will be his position in the existing democratic structure of the cabinet system of parliamentary government as it obtains today under our Constitution. All Union ministries report to the Cabinet through the Cabinet Secretary, the highest civilian adviser. Besides, he is the ultimate symbol of civilian authority over the armed services, including those that are supposed to be under the Defence Ministry.

As it is, the position and the status of the Cabinet Secretary have been considerably diluted over time. The three Service Chiefs, who are supposed to be just heads of directorates under the Defence Ministry, have conveniently “positioned” themselves outside it. In terms of pay alone, they have been equated with the Cabinet Secretary. Hence, civilian control, a basic certitude of democracy is nominal, if at all. It was bound to be, as the military now has three ‘cabinet secretaries’, reporting to no one in particular.

This virtual lack of civilian control manifests itself from time to time. Recently, the national media quoted the Army Chief, a serving officer, as publicly advocating a “short, swift and decisive” strike against our neighbour to the West. Predictably, it drew a prompt riposte from its Foreign Secretary threatening a counterstrike with ‘tactical nuclear weapons’. In this age of nuclear weapons of mass destruction, where whole cities could be wiped out in a flash, Hiroshima and Nagasaki sound like a Sunday picnic.

It was Einstein who first said that the advent of nuclear weapons had changed everything except man’s thinking about war. This was stated in the context of the frightful development of weapons of mass destruction which rendered war as unthinkable if mankind were to survive. Against this scenario, to upgrade the military voice in India and make it still more influential in the affairs of the State would be to commit hara-kiri, several Hiroshimas and Nagasakis.

Ironically, the hypothesis has no validity from the standpoint of military strategy. Conventional armies are divided into three wings -- to fight on the land, in the seas and in the air. In an all-out war, the three wings of the military may be needed to be deployed. In the post-nuclear age, it can only be as a last, desperate resort. The last time it was found necessary to effect such deployment was the Second World War. It culminated in the dropping of the atom bomb over Japan.

Since the end of the last War, more than seven decades ago, the ‘advances’ in the destructive capacity of nuclear bombs that can be dropped from the air has increased exponentially. Today, both India and Pakistan are known to possess around one hundred nuclear weapons each. These are several times the destructive capacity of the bombs that utterly devastated the two cities in Japan, killing more than one lakh people and severely burning and maiming around quarter of a million.

In the early 1980s, the UN Secretary-General had commissioned a study about the effects of nuclear war. “If the same size of weapon on Hiroshima scale were to be used against a large city like New York, there would be half to one million immediate casualties.” Today, both India and Pakistan have undisclosed bombs in their closets, enough to wipe out several cities in each other’s territory in hours, not days.

The world learned its bitter lessons from this horrible catastrophe over Japan. In the memorable words of former U.S. President Kennedy, ‘mankind must abolish war lest war may abolish mankind’. Significantly, and somewhat mercifully, all conflicts since the last World War have been short, limited wars, mostly combat on land -- the Arab-Israel conflicts, the Indo-China border war, the Balkan wars etc. In other words, uni-dimensional affairs.

President Kennedy was personally well aware of the catastrophic consequences that could possibly result if “brave soldiers” were not put under effective civilian control. In 1962, the world was aghast at the near-nuclear impending holocaust over the US-Soviet confrontation over Cuba. Even after the US Government had publicly announced the resolution of the dispute, it was discovered, to the US Government’s horror that the Air Chief, the “brave soldier” that he was, all ‘charged’ -- quite literally -- to start bombing Cuba till he was discouraged by the civilian leadership.

Mercifully, none of the post-War conflicts, save our very own with Pakistan (1965) involved the use of air force, which is fraught with the danger of supersonic aircraft carrying nuclear bombs which can reach their designated targets within minutes, giving the opponent hardly any reaction

time. Even in the case of the brief war between the UK and Argentina over Falklands, it was essentially a two-dimensional affair fought in the sea and over land in and around the island.

Military strategy defines war 'as continuation of politics by other means'. Modern warfare techniques have a predictable end -- 'mutually assured destruction' (MAD). It can be no sane government's strategy to self-destruct, no matter how much destruction might be inflicted on the enemy. As a military strategist put it, in a nuclear conflict there will be no winners, only survivors.

दैनिक जागरण

27 मई, 2016

भारत संग बड़े रक्षा सहयोग को तैयार अमेरिका

वाशिंगटन, प्रेट्र : चीन की आक्रामक सैन्य वरिष्ठ सांसद बेन कार्डिन ने कहा, भारत तैयारी के बीच अमेरिकी संसद ने दलगत और अमेरिका के बीच बहुत सारी चीजें एक भावना से ऊपर उठकर भारत के साथ जैसी हैं। चीन की गतिविधियां खासतौर पर मजबूत सैन्य संबंध स्थापित करने के लिए दक्षिण चीन सागर की स्थिति भारत और ओबामा सरकार से कहा है। अमेरिकी संसद अमेरिका को साथ काम करने के लिए के उच्च सदन सीनेट में भारत के साथ हालात बना रही हैं। दोनों देशों के बीच मजबूत रक्षा संबंधों के पेश प्रस्ताव पर चर्चा मजबूत रक्षा सहयोग जरूरी है। हमें के दौरान सांसदों ने भारतीय सेना के आतंकवाद विरोधी अभियान में साथ काम आधुनिकीकरण के लिए अत्याधुनिक करना है। हमें 2008 में मुंबई में हुए आतंकी तकनीक दिए जाने की वकालत की। हमले को नहीं भूलना है।

शक्तिशाली विदेशी मामलों की समिति सांसद मार्को रूबियो ने कहा, हम भारत के अध्यक्ष सांसद बॉब कॉर्कर ने कहा कि को चीन के संतुलन में तैयार होता देख रहे यह जरूरी हो गया है कि वाशिंगटन और थे। लेकिन, यहां मामला इससे भी बढ़कर दिल्ली एक साथ खड़े होकर लोकतांत्रिक है। भारत में बहुत ज्यादा संभावनाएं मूल्यों को मजबूत करें। हिंद और प्रशांत विद्यमान हैं। वह हमारे द्विपक्षीय संबंधों के महासागर क्षेत्र को मजबूत करें। ऐसे में लिए पूरी तरह से विश्वसनीय है। चर्चा में जबकि चीन इलाके में अपना प्रभाव बढ़ा सांसद टिम कैन ने भारत के साथ मिलकर रहा है, तभी दोनों देशों के साथ आने की रक्षा के क्षेत्र में बड़े काम किए जाने की जरूरत और बढ़ जाती है। पिछले बीस साल आवश्यकता जताई। उन्होंने 2014 में में अमेरिका और भारत के संबंधों का महत्व मझगांव डॉकयार्ड के अपने दौर का जिक्र बदला है। इस समय दोनों देशों के बीच किया, जहां नौसेना के लिए जहाज बनाए जा अभूतपूर्व राजनीतिक, आर्थिक और रहे थे।

सामरिक साझेदारी है। इस साझेदारी को और मजबूत किए जाने की जरूरत आ गई है। अब वैश्विक स्तर पर सहयोग के लिए दोनों देशों के बीच मजबूत रक्षा सहयोग जरूरी है।

G7 agrees need strong message on South China Sea; China says don't 'hype'

Group of Seven (G7) leaders agreed on Thursday on the need to send a strong message on maritime claims in the western Pacific, where an increasingly assertive China is locked in territorial disputes with Japan and several Southeast Asian nations.

The agreement prompted a sharp rejoinder from China, which is not in the G7 club but whose rise as a power has put it at the heart of some discussions at the advanced nations' summit in Ise-Shima, central Japan.

"Prime Minister (Shinzo) Abe led discussion on the current situation in the South China Sea and East China Sea. Other G7 leaders said it is necessary for G7 to issue a clear signal," Japanese Deputy Chief Cabinet Secretary Hiroshige Seko told reporters after a session on foreign policy affairs.

At a news conference late on Wednesday, Abe said Japan welcomed China's peaceful rise while repeating Tokyo's opposition to acts that try to change the status quo by force. He also urged respect for the rule of law. Both principles are expected to be mentioned in a statement after the summit.

The United States is also increasingly concerned about China's action in the region.

Chinese Foreign Ministry spokeswoman Hua Chunying retorted in Beijing that the South China Sea issue had "nothing to do" with the G7 or any of its members.

"China is resolutely opposed to individual countries hyping up the South China Sea for personal gain," she said.

U.S. President Barack Obama called on China on Wednesday to resolve maritime disputes peacefully and he reiterated that the United States was simply concerned about freedom of navigation and overflight in the region.

Obama on Thursday pointed to the risks from North Korea's nuclear and missile programs, saying the isolated state was "hell bent" on getting atomic weapons.

But he said there had been improved responses from countries in the region like China that could reduce the risk of North Korea selling weapons or nuclear material.

"It's something that we've put at the center of discussions and negotiations with China," Obama told reporters.

Seko, speaking the first of two days of the summit in central Japan, said Abe told G7 counterparts that Pyongyang's development of nuclear technology and ballistic missiles poses a threat to international peace, including in Europe.

"It is necessary to make North Korea realize that it would not be able have a bright future unless such issues as abduction, nuclear and missile development are resolved," Abe told the group, according to Seko.

The G7 groups Britain, Canada, France, Germany, Italy, Japan and the United States.

Economic Times
27 May, 2016

Followed Rules in US Aircraft Intercept: China

Beijing: China's Defence Ministry said on Thursday its aircraft followed the rules after two Chinese fighter jets carried out what the United States said was an "unsafe" intercept of a US military reconnaissance aircraft over the South China Sea. The incident took place in international airspace last week as the plane carried out "a routine US patrol", the Pentagon said. A US defence official said two Chinese J-11 fighter jets flew within 50 feet of the US EP-3 aircraft. The official said the incident took place east of Hainan island. Chinese Defence Ministry spokesman Yang Yujun told a monthly news briefing China's aircraft acted completely professionally and in line with an agreement reached between the countries on rules governing such encounters. Reuters

Deccan Herald
27 May, 2016

Reusable shuttle: Isro's mega success

"Cost of putting payloads into space can be cut by 10 times."

The Indian Space Research Organisation's successful testing of the prototype of a Reusable Launch Vehicle (RLV) marks an important stage in the progress of the country's space programme. It is a major step towards developing a launch vehicle capable of sending a spacecraft into orbit and returning to the earth's surface. A number of new technologies which the Isro has not tried till now were tested in the programme. The RLV, configured as a winged body space plane, had to fly at hypersonic speed, re-enter the atmosphere with all protection systems intact and touchdown in a predetermined area. The "landing" was in the Bay of Bengal. The Isro has stated that all technologies worked well and the mission was a "fantastic" success. All the technologies involved in the launch were developed within the country. They were a class different from those which were employed in earlier space missions.

The success of the RLV is not only about new technologies but about the cost of the launches too. India's space programme has been known to be the most cost-effective in the world. When the RLV programme is fully developed, it can reduce the cost of putting payloads into space by as much as 10 times. It costs about \$ 20,000 to put one kg of payload into space now. An RLV can bring it down to \$ 2,000. The development cost of the programme till now is only Rs 95 crore. The RLV is to be used as a space shuttle. The US and Russia have used such shuttles in their space missions. The US flew 15 missions with five space shuttles. NASA has stopped using shuttles but two private corporations in the US - Elon Musk's SpaceX and Bezos' Blue Origin - have developed them. India is the fifth nation after the US, Russia, France and Japan to develop a space shuttle.

The RLV launched May 23 was a technology demonstrator. It is only sixth in size and weight of the real shuttle which will be used for actual space flights. More technical development and experimental flights are required for the programme. Two models with more features are to be launched in the near future. It is estimated that it will take 10-15 years to fully develop and deploy an Indian shuttle. It might seem to be a long time but the utility of the

space shuttle will be as high after 15 years as now. The benefits of lower launch costs and mastery of new technologies will make the reusable launch vehicle program-me worthy of the time, effort and money invested in it.

After reuse trial, long flight ahead

The excitement over the success of the RLV is deserved, but ISRO has done this twice before. The cost benefits of a reusable launch vehicle remain uncertain, and the challenges before ISRO huge.

While the testing of a prototype Reusable Launch Vehicle (RLV) on Monday is no doubt an important milestone for ISRO, it is easy to see why the space organisation itself has been calling it only a “baby step” towards the objective of acquiring a launcher that can deliver satellites into space just like airplanes transport passengers and cargo.

The RLV technology is at least four decades old, and several nations, and even private space firms, have experimented with it. However, only NASA has put it to any practical use until now, in its much-acclaimed space shuttle programme that ran from 1981 to 2011.

The main rationale for developing a reusable system is to bring down the costs of satellite launch, and to increase the frequency of launches. Satellites and scientific instruments need to ride on rockets to go into space. These are of the use-and-throw kind, which mostly fall into the sea after doing their job, or sometimes float uselessly in space, adding to space debris. Reusable rockets can save the costs of building a new vehicle for every launch, and also the manufacturing time, thus enabling more frequent launches.

No quick cost cuts

It is estimated that RLV, once fully developed in about a decade, could bring down launch costs 8-10 times. Currently, it costs Rs 6-8 lakh to send a 1 kg payload into a low earth orbit. The PSLV and GSLV carry payloads of 1,000-2,500 kg per flight.

Since no RLVs have been used except in NASA’s space shuttle programme, there is little direct evidence for cost reductions. Besides, the space shuttle programme was driven more by the need to frequently carry astronauts and logistics to the International Space Station than to cut launch costs. In 30 years, the shuttle flew 135 missions — or 4.5 times a year on average. The programme budget was about \$ 209 billion (2011 \$), making the average mission cost more than \$ 1.5 billion (approx Rs 10,000 crore today). This cost included expenses over buildings, salaries and other logistics. And though the shuttle was reusable, albeit only partially, the incremental cost per flight was estimated to be about \$ 450 million (approx Rs 3,000 crore). This cost can be an indication of the service, repair and replacements needed before every flight. There is no estimate of how much additional money NASA would have spent if it had used an expendable launch vehicle instead of a partially reusable one.

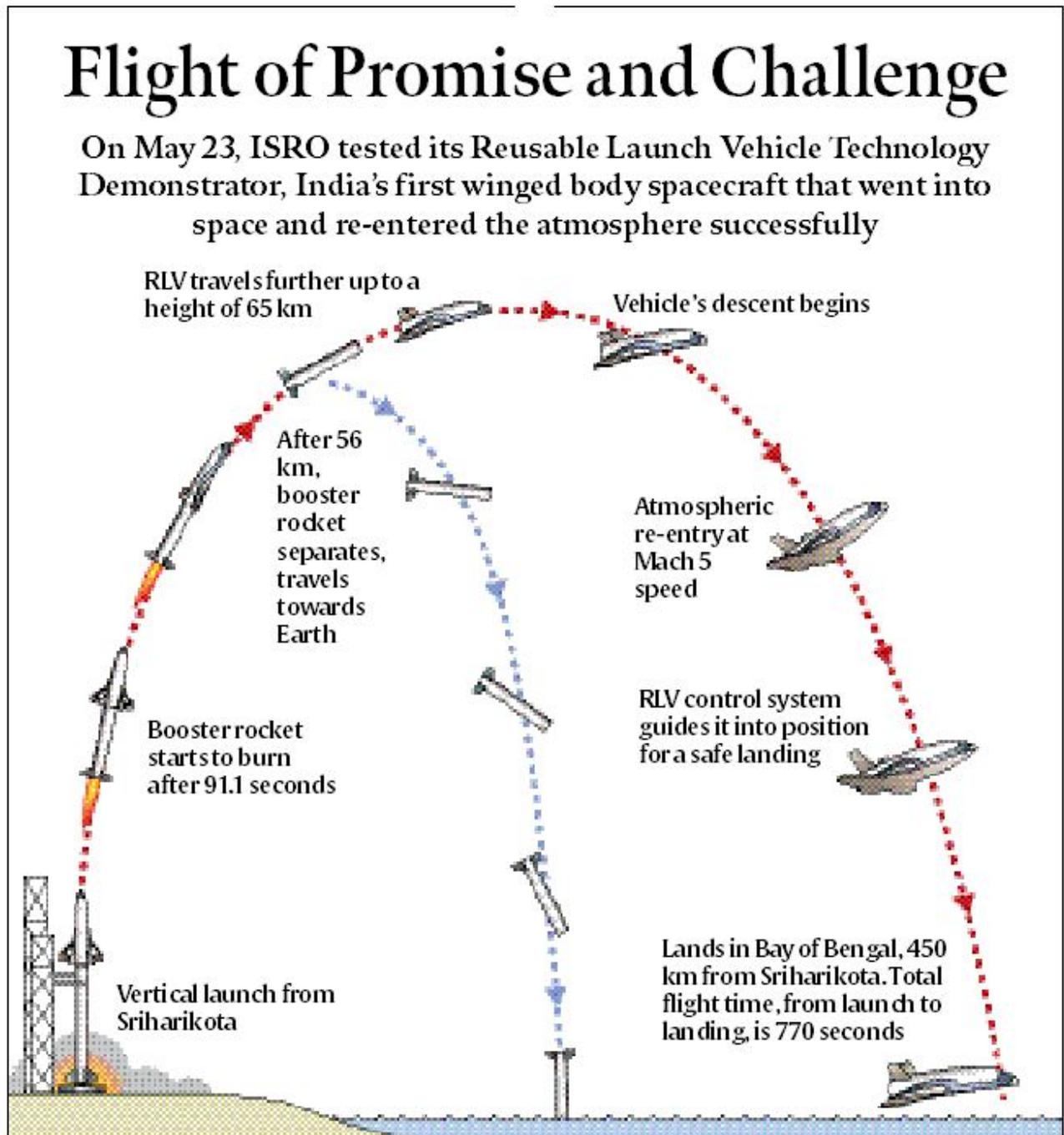
Also, the cost advantage of a reusable vehicle can become evident only over several launches. That is because the development cost of RLV far exceeds the manufacturing cost of an existing launch vehicle. ISRO has spent about Rs 90 crore on developing the prototype RLV. The likely cost of an operational RLV over the next 10 years is expected to be substantially more than the average cost of a PSLV, which is about Rs 120 crore. A GSLV costs about Rs 170 crore. The development of an experimental fully reusable vehicle called X-33 by NASA, aborted in 2001, cost \$ 1.3 billion (about Rs 9,000).

Several studies have compared the costs of a fully reusable system and continued use of an expendable vehicle. The results vary depending on the parameters chosen.

Degree of reusability

The cost advantage also depends on the degree of reusability built into the vehicle. There are different stages to the flight of a launch vehicle. At each stage, a part of the rocket breaks off, while providing thrust to the remainder to keep going. There are designs of Single-Stage-To-Orbit (SSTO) vehicles that would not require booster parts. But most vehicles in use today are multi-stage rockets.

A fully reusable vehicle would deliver payloads into orbits and return to Earth completely intact. Even a Two-Stage-To-Orbit (TSTO) vehicle, which ISRO's tested prototype was, can be fully reusable if both the parts are made to fly back to Earth. In the case of the prototype tested on Monday, only the second stage, a winged structure that looks like an airplane, re-entered the atmosphere and landed in the Bay of Bengal for possible reuse.



In the NASA shuttle, the final stage, called the orbital vehicle, was reusable while some components of the boost stages were also recovered and reused after servicing. Studies have shown that recovery and reuse of the final stage, or the orbital vehicle, has more cost benefits compared to the boost stages.

On the degree of reusability depends the repairs and servicing required before reuse.

Not the first time

In January 2007, ISRO launched a 555-kg space capsule aboard PSLV-C7 that remained in orbit for 12 days before re-entering the atmosphere and crashing into the Bay of Bengal. In December 2014, ISRO carried out the Crew Module Atmospheric Re-entry Experiment, sending a heavy payload to a height of 126 km on the inaugural experimental flight of GSLV-Mk III, an advanced launch vehicle still under development. The payload separated and re-entered the atmosphere, and fell into the Bay of Bengal after a nearly 21-minute flight.

However, both these re-entries were meant to result in crash landings. The vehicle could be recovered but not reused. The RLV prototype was structurally very different — the winged structure intended to be able to make a soft landing like an airplane, and thus much more challenging. The actual RLV, when it is developed, would have to land on a runway. ISRO has said a 5-km runway, more than double the length of the longest in the country, would have to be built for it.

Deccan Herald
27 May, 2016

Solar, wind energy to power Internet of Things in future

Washington: In a first, scientists have integrated a solar cell and a nanogenerator that can convert wind energy into electricity in a single device that may power the 'Internet of Things'.

The 'Internet of Things' could make cities "smarter" by connecting an extensive network of tiny communications devices to make life more efficient, according to researchers from Georgia Institute of Technology in the US and National Centre for Nanoscience and Technology in Beijing.

However, all these machines will require a lot of energy. Rather than adding to the global reliance on fossil fuels to power the network, researchers say they can be powered by a single device that harvests wind and solar energy.

According to reports, computer industry experts predict that tens of billions of gadgets will make up the Internet of Things within just five years.

They will be in homes, syncing coffee makers to alarm clocks. They will also be in buildings, managing lights and air temperature.

However, they also require energy to run. Sustainably generating more energy in cities close to where the devices will be used is challenging. For example, cities do not have much space for towering wind turbines, they said.

For the first time, researchers have integrated two energy harvesting technologies in one - a silicon solar cell and a nanogenerator that can convert wind energy into electrical output.

The solar cell component of the system delivers 8 milliWatts of power output. One milliWatt can light up 100 small light-emitting diodes (LEDs), researchers said.

The wind harvesting component delivers up to 26 milliWatts, they said.

The Asian Age
27 May, 2016

Common painkiller can slow cancer growth rate

One of the most-widely prescribed pain and anti-inflammation drug may also slow the growth rate of cancer, a new study has found.

The study focused on the effects of celecoxib or Celebrex. It targets an enzyme called “cyclooxygenase-2” (COX-2), which is linked to pain and inflammation, researchers said. This enzyme is also critical in the creation of prostaglandins, compounds that act like hormones and play a role in promoting tumour growth, they said.

COX-2 expression is typically low in normal tissue, but high in multiple types of cancers, researchers said. “We were actually interested in determining what a particular signalling pathway does in cancer,” said Joseph Kissil from The Scripps Research Institute (TSRI) in the US.

“In the process, we found that it activates genes that promote survival of tumour cells and that they do so by turning on enzymes involved in inflammation, including COX2, which anti-inflammatory drugs like Celebrex inhibit,” said Kissil. Researchers conducted animal studies tracking the effects of celecoxib on the growth of cancer cells from a tumour type known as neurofibromatosis type II (NF2).

The Times of India
27 May, 2016

Soon, the length of a second could change

By Ian Johnston

For nearly 50 years, the length of a second has been defined in the same way. But researchers in Germany have found how to make the most accurate clock ever created, which if it had started 14 billion years ago at the Big Bang would have lost just 100 seconds.

While the change in accuracy would hardly be noticed by humans, it could be significant for GPS navigation as well as electrical power grids. And because the clock uses a different way of measuring time, it could alter length of seconds, minutes and hours by miniscule amount.

Time is measured based on the idea of a pendulum. Since 1967, the International System of Units has defined second as the time that elapses during 9,192,631,770 cycles of the microwave signal produced by these oscillations. However, they have an error of about a nanosecond every 30 days.

A paper in journal *Optica* says the new clock uses strontium atoms, which “tick” much faster than caesium. And they do so in optical, rather than the microwave, part of the spectrum. If a second was defined in terms of strontium, the equivalent SI unit would be 429,000 billion cycles. This method of calculating length of a second reduces the error to less than 0.2 nanoseconds in 25 days.