

Key defence projects on `Make in India' path

The Army is now trying to go "desi" with a vengeance. Long dependent on foreign military hardware for its combat capabilities, the 1.18million-strong force's new mantra is indigenisation in tune with the NDA government's `Make in India' policy . The Army , lagging far behind the much-smaller Navy and IAF in the modernisation drive, has now also prioritised 26 procurement schemes that need to be fast-tracked. Seven projects, including acquisition of 155mm howitzers, air defence guns and light utility helicopters, have been placed in the "critical" category , while there are 11 in the "important" and eight in the "essential" ones. Though some of these re quirements will have to originate from abroad, the aim is to ensure there is a major `Make in India' component wherever possible. With "a relatively much larger range and depth of inventory" than the Navy and IAF, the Army is "most suited" to meet its needs of platforms, systems and munitions through indigenous production. "No nation can aspire to achieve great power status without a versatile indigenous R&D and defence production base...the Army is pursuing an ambitious indigenisation drive," said General Dalbir Singh Suhag, ahead of the Army Day on Friday . Some inroads have already been made. "We have signed 73% of procurement contracts in the past few years with Indian companies. In fact, in the last one year, this has risen to 87%. In terms of value, 55% of our modernisation budget has been spent on the Indian industry ," he added. With the government now revising the entire defence procurement procedure to bolster the country's fledgling defence industrial base, a new Army Design Bureau is also being established to work closely with DRDO and Ordnance Factory Board (OFB) to promote indigenisation. India continues to import 65% of its military requirements because of the tardy performance of DRDO and its 50 labs, five defence PSUs, four shipyards and 39 ordnance factories as well as the inability to encourage the private sector to enter defence production in a big way . The Army , however, says new beginnings are now on the anvil.

WORLD'S 2ND-LARGEST STANDING ARMY, WITH HIGHLY DISCIPLINED & WELL-TRAINED 39,000 OFFICERS & 11.3 LAKH SOLDIERS

STRENGTHS & WEAKNESSES



- 6 operational/regional commands & 1 training command
- 14 Corps, including 3 existing 'Strike' ones at Mathura (1 Corps), Ambala (2 Corps) and Bhopal (21 Corps), and a new Mountain Strike Corps being raised at Pannagarh (17 Corps)
- 382 Infantry battalions (each with over 800 soldiers) & 63 Rashtriya Rifles battalions
- 63 Armoured Regiments (800 T-90S, 2,400 T-72 & 124 Arjun tanks) & 44 Mechanized Infantry Units (1,900 BMP infantry combat vehicles)
- 281 Artillery Regiments & 56 Air Defence Units

CRITICAL OPERATIONAL GAPS

- No 155mm artillery gun inducted since 1980s Bofors scandal
- Largely obsolete air defence guns
- Inadequate night-fighting capabilities
- Ageing light helicopters; no dedicated attack helicopters
- Poor ammunition reserves. Not enough for even 20 days of 'intense fighting' when 40 days required



- Lack of 3rd generation anti-tank guided missiles
- Infantry soldiers lack modern/advanced assault rifles, close-quarter battle carbines, light machine guns, sniper rifles, modular bullet-proof jackets & light-weight ballistic helmets

Design in India

Defence procurement policy takes a step forward

Private defence companies are rightly pleased about the Defence Procurement Procedure of 2016 (DPP-2016), the eighth version of the DPP, which Defence Minister Manohar Parrikar outlined on Monday, but will take another two months to be promulgated. Private industry chiefs believe that the central issues that have dogged equipment acquisition have finally been addressed. Besides recommendations from the private sector, the new policy also reflects many ideas offered by the Dhirendra Singh Committee that submitted its recommendations last year. Perhaps the most far-reaching change in DPP-2016 is the recognition of indigenous design and development as more important than manufacturing components as per blueprints given by foreign vendors. While manufacturing indeed creates blue-collar jobs, and a manufacturing ecosystem is essential for a defence industry; it is the design and development of systems and weapons platforms that create strategic and technological autonomy, and long-term self-sufficiency in defence. It is one thing to manufacture aerospace and defence components for global defence supply chains, and quite another to design and develop a fighter aircraft, even one with many foreign components, systems and sub-systems. Besides strategic autonomy, indigenous design and development create intellectual property and white-collar jobs for India's large scientific and technological community. The incorporation of a new procurement category into DPP-2016 - termed Indigenous Design, Development and Manufacture (IDDM) - and the top priority it will enjoy in the procurement hierarchy, signals new intent. In the past few years, a vibrant procedure to encourage indigenous manufacturing, with the government funding indigenous design and development of specific platforms to the extent of 80 per cent of the project cost, has been recognised as central for developing the defence industry. Yet, cumbersome procedures and inefficient implementation have so far allowed only two manufacturing projects to be awarded. Now DPP-2016 intends to revitalise indigenous manufacturing by creating three separate categories. In the first, government funding has been increased to 90 per cent of the project cost. In the second category, companies would put their own money into a project (and thus be spared the ministry's oversight), while being assured of orders for a successful development. The third category reserves projects worth less than Rs 3 crore for the small-scale industry, which is where high-technology innovation traditionally occurs in defence. The key to success in indigenous manufacturing lies, first, in choosing projects wisely and then, secondly, in letting companies focus on their projects without government interference. Allowing industry to fund its own design and development, while providing assurances that its expenses would be met, is an ingenious solution for this. What the government would do well to change before DPP-2016 comes into force is the defence ministry's decision to raise the offset threshold from Rs 300 crore to Rs 2,000 crore. There will be few buyers for the ministry's rationale that offsets raise the cost of equipment by 20 per cent. If that were indeed so, why have offsets been imposed on contracts worth more than Rs 2,000 crore? The reality is that the defence ministry has not been able to formulate suitable offset demands, contract them effectively and account for the fulfilling of offsets obligation. It would be a pity if defence manufacturers are denied orders because of this inefficiency.

Raising of Mountain Strike Corps on track: Army Chief

China-centric corps to be ready by 2021 with no budgetary cuts. Two years into the raising of the China-centric Mountain Strike Corps, Army Chief General Dalbir Singh Suhag has announced that the new Corps is being raised as per schedule, putting to rest the speculation that the force levels had been halved and the raising had been slowed down. The Corps was approved by the Cabinet Committee on Security (CCS) in September 2013 and its raising started in January 2014 when the first commander was appointed. The Corps with nearly 90,000 soldiers is to cost Rs 64,700 crore, out of which around Rs 39,000 crore has been earmarked for capital expenditure - new weapons and guns. Asked about reports that the government was restructuring the Mountain Strike Corps, General Suhag said there was no move to slow down its raising. "A target was kept of nine years and we are on target to raise it by 2021," he told reporters yesterday, adding that there had been no budgetary cuts. The Corps with its headquarters at Panagarh in West Bengal is slated to have two divisions - one in the North-East and another at Pathankot. It will also have Brigades placed at locations all along the Himalayas - India shares 3,448 km boundary with China along the Himalayan ridgeline. It will also have troops based in the Himalayan foothills backed by rapid deployment onboard special operations planes such as the C-130-J and the C-17. India is also buying specialist heavy lift helicopters the Chinook CH-47 that can be used for troop insertion in mountains. The Corps' raising itself has been mired in controversy. A parliamentary standing committee in August last year rapped the Defence Ministry for "milking existing resources". A report tabled in Parliament said: "The Committee is constrained to note that the raising of Mountain Strike Corps was commended utilising War Wastage Reserves (WWR), which are war reserves and not to be touched otherwise."

The Indian Express

15 January 2016

Army Chief Inaugurates Directorate of Indian Army Veterans

NEW DELHI: Army chief General Dalbir Singh Suhag inaugurated the Directorate of Indian Army Veterans here today when the force celebrated the first-ever Veterans Day, even as the ex-servicemen continued their protests over the 'One Rank, One Pension' scheme. Located in Delhi Cantonment, the directorate will provide a wide range of veteran care and support services, as also a single point of contact, or redress, to the veterans and their widows and wards residing across the country. The inauguration of the new directorate under the Adjutant General Branch coincides with the first-ever celebration of Veterans Day in the Indian Army. The day marks the relinquishment of active service by India's two most well-known military leaders Field Marshal KM Cariappa and Field Marshal SHFJ Manekshaw in 1953 and 1973, respectively. Speaking on the occasion, Suhag stressed the need to strengthen the institutional framework for veteran care and support in the Indian Army. He said that the raising of the Directorate of Indian Army Veterans (DIAV) marks the first step towards creating a coherent veteran care and support structure in India. He added that there is more that needs to be done at the last mile, which will follow consequent to the raising of the new directorate. Building on the existing framework of Army HQ Veterans Cell, the DIAV is organised into four verticals, namely Policy and Outreach, Pension and Entitlements, Benefits and Services and Career Transition Planning Sections. Each vertical will be headed by a Director-level officer fully versed in veteran matters and duly assisted by a mix of serving and retired officers. To mark the occasion, the Army chief also released the inaugural issue of 'Samaan' magazine, which is focussed on the role of veterans in national building. The ex-servicemen have been protesting against the government's stand on the 'One Rank, One Pension' issue.

Army's Heroic effort during chennai floods

Chennai's worst nightmare came true when the city faced the mayhem caused due to territorial rains, leaving millions stranded and homeless. Indian Army showcased colossal courage and dedication; and deployed rescue teams to provide recovery and aid. The severe spell of rains knocked Chennai with flood waters seeping into homes, subways, hospitals, hotels as well as the Chennai Airport, leaving millions marooned at their homes. The flood waters had destroyed close to 4.93 lakh huts and affected 25.48 lakh houses. The rains had broken a 100-year-old record with one day's rainfall covering a month's average and flooded areas in Vadapalani, Valasaravakkam and Nandambakkam as nearby lakes overflowed into the city. The Indian Army began the rescue and relief work on a war footing. Army Rescue and Relief Teams contributed towards humanitarian services in the worst-affected areas of Tambaram- the southern gateway to the city, Mudichur and Oorapakkam. Personnel from the Garrison Battalion of the Indian Army were pressed into service at Mudichur in Kacheepuram on request of the district administration. Surplus water from lakes and tanks at Mudichur entered the suburban Tambaram locality, inundating a large part. Army personnel assisted the district administration in the rescue efforts during these testing times. Two columns of Army team headed to Chennai for rescue and relief ops from Hyderabad. Helicopter operations too were in full swing with four medium lift helicopters, one advance light helicopter and five Chetak/ Cheetah involved actively to evacuate stranded people. One helicopter was positioned in Tirupati to aid the Andhra Pradesh government. Meanwhile, 40 rescue and relief teams and five engineer teams were also put in for carrying out rescue operations in the most critical areas of Chennai. These teams operated in Tambaram, Mudichur, Kothurpuram, Pallavaram, Thirunelveli, Urapakkam, Manipakkam, T. Nagar and Gudvancheri towards the outskirts of Chennai and also along areas adjacent to Adyar River. Over 30 Army trucks also ferried stranded people in areas where the water level was less than six feet.

Providing to the needy - In Chennai, the Army began the rescue and relief work on a war footing. With over 70 teams, 57 medium sized and 16 small boats undertaking rescue and relief operations, the men in olive green uniform turned good Samaritans and successfully rescued 19,600 people. Medical aid was provided to 22,100 people. Rescue and relief teams along with medical teams at Cuddalore and Bhuvanagiri were also deployed for immediate action. The extended helping hand reached those stuck in Muddichur, Medavakkam, Guduvancherry, Tambaram and Urapakkam. Two columns of the Army's Garrison Infantry Battalion were pressed into the service in Tambaram and Oorapakkam after the Tamil Nadu government sought military assistance. Military Hospital at St. Thomas Mount was also made operational. Rescue and relief teams carrying Army Engineers were also deployed in the critical areas of Chennai. Army jawans launched extensive rescue and relief in Chennai's Defence Colony area of Nandambakkam on motorboats. The jawans worked round the clock and went door to door, answering every call for help that was reaching them. The army also successfully rescued around 19,600 persons in all from the devastating floods and distributed 2,00,000 food packets and relief materials.

High level meeting : Indian Coast Guard and Japan Coast Guard

A high-level delegation led by Vice Admiral Hideyo Hanazumi, the Vice Commandant, Japan Coast Guard (JCG), is visiting India from 12-16 January, 2016, for the High Level Meeting and Combined Exercises, with the Indian Coast Guard (ICG). The visit is in pursuance of the Memorandum of Cooperation (MoC), signed between the two Coast Guards in 2006, which stipulates that the heads of the two organizations meet every year to discuss maritime issues of mutual concerns and formulate a cooperative approach to address these. The MoC between the two Coast Guards encompasses issues of maritime search and rescue, combating marine pollution, technical assistance for responding to natural disasters and exchange of information regarding crimes at sea, including smuggling and illicit-trafficking. The visiting delegation called on Vice Admiral HCS Bisht, AVSM, Director General Indian Coast Guard. The Indian delegation during the High Level Meeting was headed by ADG Rajendra Singh, PTM, TM, Additional Director General Indian Coast Guard.



Indian Coast Guard ship : ICGS Samundra Pawak



Indian Coast Guard Ship Samudra Pavak, the third and last in the series of three 95m Pollution Control Vessels (PCVs) was commissioned at Porbandar by Defence Secretary, G Mohan Kumar on 14-16 January in the presence of Vice Admiral HCS Bisht AVSM, Director General Indian Coast Guard, ADG SPS Basra YSM, PTM, TM, Coast Guard Commander (Western Seaboard), CMD ABG Shipyard, Rishi Agarwal, and other senior dignitaries of the Central and State Government. 'Samudra Pavak' meaning 'Pure' is a projection of Indian Coast Guard's will and commitment 'To serve and protect' the maritime interest of the nation. ICGS Samudra Pavak is manned by a complement of 11 Officers and 100 men and commanded by Deputy Inspector General Satish Kumar, TM under the overall command and control of Commander, Regional Headquarters (North West).

The Army's changing face and role

By Dinesh Kumar

Army Day, today, calls for stocktaking - especially of the internal health of the Indian Army. Even in the 21st century, basics such as bullet-proof vests, night-vision devices and thermal imagers are in short supply. On January 15, 1949, barely a fortnight after the Indian Army had finished battling a newly created Pakistan for a year and two months over Jammu and Kashmir under the command of a British general, the Indian Army got its first Indian citizen as its Commander-in-Chief (redesignated Chief of Army Staff in 1955) in Field Marshal (then Lieutenant-General) Kodandera Madappa Cariappa. Since then, January 15 is observed as



Army tanks during the rehearsal for the Republic Day parade at Rajpath in New Delhi

Army Day in post-Independence India. After a fiery start immediately after Partition, the 1950s turned out to be a relatively quiet decade for the Army although there was otherwise considerable disquiet on the geopolitical front. China's occupation of Tibet, followed by its aggressive posturing and cartographic aggression of questionably defined Sino-Indian land boundaries, Pakistan's brazen tilt towards the United States and forging of military alliances with that country along with its quiet befriending of China, and, within India, the secessionist movement in Nagaland were some of the causes for serious concern. The fallout from these developments defined the 1960s and the Army's role. During that decade, the Army got heavily engaged in a series of military operations that included fighting three intensive wars within a span of just nine years. It started with liberating Goa from Portuguese rule in 1961, followed a year later by the Sino-Indian war in 1962 during which India lost territory in Ladakh. Less than three years later, in 1965, the Army was again fighting a war, this time with Pakistan, which first began with a smaller scale skirmish in Gujarat's Rann area and then a full-fledged war along the entire land frontier starting from Jammu and Kashmir. Six years later, in 1971, the Indian and Pakistani armed forces were locked in a fierce war which witnessed the dismemberment of East Pakistan from West Pakistan. But since the 1971 war, warfare in the subcontinent has undergone a paradigm shift. Other than the 1999 limited mountain war in the freezing heights of Ladakh's Kargil region, the Indian Army has not fought a conventional war. Neither is a conventional war likely in at least the near future. Indeed, from conventional wars, warfare has moved to various irregular forms such as proxy war, guerrilla warfare and other such forms of low-intensity conflict, and terror attacks. This has required the Army to considerably reorient itself

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The Army's changing face and role

and train differently which has come at a considerable price. And yet, the Army, the world's fourth largest, cannot be unmindful of the country's long stretches of land borders, considerable portions of which are undefined. These need continuous safeguarding and preparation for a conventional war. Neither can it stay oblivious to the scale of military modernisation being effected in the neighbourhood, especially by China which is a de facto superpower and considered a competitor and long-term adversary. Wide gaps and deficiencies in the Army's ability to successfully fight a conventional war are well known and widely documented by, for example, successive reports prepared by the Parliamentary Standing Committee on defence. These deficiencies have arisen over time, reflecting adversely on the functioning of the Government - irrespective of the political dispensation in power. The deficiencies are across all spectrum of equipment - from rifles and ammunition to big-ticket items such as artillery and air-defence guns to name a few. Considering that low-intensity conflict is what the Army is most preoccupied with, the Army of the world's sixth nuclear weapon state continues to suffer shortfall of some basic equipment, starting with bullet-proof vests, night-vision devices, thermal imagers and direction-finding equipment in the 21st century. The Army's involvement in combating low-intensity conflict dates back to the late-1950s, when it was first inducted in such operations to fight Naga rebels in Nagaland. Since then, the Army has seen similar operations in Mizoram, Manipur and Assam. While the Army's engagement in Punjab was only for a limited period, it is in the state of Jammu and Kashmir, beginning from 1989, that the Army continues to be engaged in its longest and most intensive spell of low-intensity conflict operations. These operations have resulted in a considerable number of casualties of officers and soldiers in the last two-and-a-half decades. The Army has had to change its orientation - fighting terrorists and insurgents often indistinguishable from civilians rather than a visible and clearly defined enemy in uniform. This has led to other problems. In their anxiety to get noticed, "careerist officers" have sometimes engaged in professionally unethical actions. Similarly, some over-enthusiastic officers have killed innocents on a few occasions. Others have taken advantage of the situation and engaged in corruption. These actions have, on occasions, combined to give a well-established apolitical institution a bad name in a state where the stakes are high. Any adverse incident gets magnified by the Pakistani establishment, terrorist groups, the international community and the civilian population. All this and more has taken a toll on the internal health of the Army. Shortfalls in the officer cadre, which average about 10,000 less than the authorised sanctioned strength of 49,737, has meant that many combat units are functioning at about 50 per cent of their sanctioned strength. As a result, officers with little experience are being tasked to command companies (about 125 soldiers), are multi-tasking by being burdened with more responsibilities and are unable to spend much time with the soldiers they command and foster a bond with them. Rather, there have been several incidents of violence between officers and soldiers in the past few years. It does not end here. The background of the soldier is no longer that of an illiterate peasant from the village. Some are better educated and almost everyone is far more aware due to the ongoing revolution in information and communication technologies (ICTs). But ICTs have also created a new set of problems. Instant messaging also means soldiers are in regular touch with their families. It is fine so long as the messages are positive in nature. But when problems get communicated, these impact a soldier's mind, especially in a low-intensity conflict environment. Problems could be manifold but land disputes and marital issues are the commonest. Tensions and disconnect between officers and soldiers in battalions has only worsened matters. The impact was most evident between 2001 and 2011, during which as many as 1,056 soldiers committed suicide. This trend has declined in recent years, following a series of steps taken as a result of a study conducted by the Defence Institute of Psychological Research. The impact of social media and instant messaging is not confined to the soldiers alone. Increasingly, officers are using this medium to voice and communicate their discontent with the system. Whether it is their reservations about the One Rank One Pension announced by the Government, recommendations of the Seventh Pay Commission or criticism at the handling of the terror attack on the IAF base in Pathankot, the officer cadre is ever more vocal than before. As is the case in most organisations, the problem begins from the top. Recent years have witnessed much infighting, expression of resentment and politicking among the top brass, including at the level of the Chief. Clearly, the Army needs to introspect and address issues concerning its internal health, including the quality of its leadership.



68th Army Day

In the past six decades the Indian Army has grown to be a professional, apolitical and humanitarian force to reckon with, while serving in the most adverse and diverse conditions. The Indian Army during this period has fought four major wars, been involved in a protracted and intense 'eyeball to eyeball' border situation while confronting a proxy war along its western borders and has gained extensive experience in counterterrorist operations in Jammu and Kashmir and the North East. It has also participated in several peace keeping operations under the mandate of the United Nations.

EPITOME OF UNITY IN DIVERSITY - Indian Army, which is popularly known as mini-India has Officers and Jawans hailing from all provinces, all ethnic cultures and speaking different languages. They live together, eat together, train together and fight together to defend the sovereignty of the nation, thus setting an example of "Unity in Diversity." While the Jawans have earned acclaim in all the wars fought since Independence, they have also endeared themselves with their countrymen by helping them during natural and manmade calamities and have earned gratitude. Indian Army has also earned appreciation of this grateful nation in counterinsurgency, counter-terror and the ongoing proxy war.

STRENGTHENING INDIA - Apart from the main responsibility of defending the borders of the country, the Army renders assistance to civil authority when called upon to do so, for the maintenance of law and order, maintenance of essential services, disaster relief and other types of assistance. Over the years, the scope of the Army's role in disaster management has enlarged gradually. It is invariably the first responder in disaster situations. The versatile capabilities of the Army to respond to any form of disaster can be best exemplified by the assistance provided during the earthquake in Nepal as well as the rescue and relief operations conducted in Chennai floods during the last year.

Previous StoryNext Story - Today is the 68th Army Day. The Indian Army since Independence has lived up to its tradition of valour, heroism, sacrifice and fortitude. It stands vigilant along the border so that the people of the country may live with peace and honour. Every year the Indian Army celebrates 15 January as Army Day to commemorate the Day when Gen (later Field Marshal) K. M. Cariappa took over the command of Indian Army from Gen Sir F.R.R. Bucher in 1949 and became the first Commander-in-Chief of the Indian Army after Independence. In the past six decades the Indian Army has grown to be a professional, apolitical and humanitarian force to reckon with, while serving in the most adverse and diverse conditions. The Indian Army during this period has fought four major wars, been involved in a protracted and intense 'eyeball to eyeball' border situation while confronting a proxy war along its western borders and has gained extensive experience in counterterrorist operations in Jammu and Kashmir and the North East. It has also participated in several peace keeping operations under the mandate of the United Nations.

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Role of Indian soldiers in World War-I

IN WORLD WAR I THE INDIAN ARMY FOUGHT AGAINST THE GERMAN EMPIRE IN GERMAN EAST AFRICA AND ON THE WESTERN FRONT. KHUDADAD KHAN BECAME THE FIRST INDIAN TO BE AWARDED A VICTORIA CROSS.

World War I, also known as the First World War or the Great War, was a global war centred in Europe that began on 28 July 1914 and lasted until 11 November 1918. It was one of the deadliest conflicts in history, paving the way for major political changes, including revolutions in many of the nations involved. The Indian Army during World War I contributed a large number of divisions and independent brigades to the European, Mediterranean and the Middle East theatres of war in World War I. Over one million Indian troops served overseas, of whom 67,000 were wounded and in total at least 74,187 Indian soldiers died during the war. In World War I, the Indian Army fought against the German Empire in German East Africa and on the Western Front. Indian divisions were also sent to Egypt, Gallipoli and nearly 700,000 served in Mesopotamia against the Ottoman Empire. While some divisions were sent overseas others had to remain in India guarding the North West Frontier and on internal security and training duties. In 1914, the Indian Army was the largest volunteer army in the world with a total strength of close to 2,40,000 men and by November 1918 it contained 5,48,311 men, being considered the Imperial Strategic Reserve. **INDIAN ARMY'S ENTRY INTO THE WAR** In 1901 oil had been discovered in commercial quantities at Masjid-e-Suleiman at the head of the Persian Gulf. At the start of the war in 1914, the privately owned Anglo-Persian Oil Company, which owned the concessions for these fields was about to be bought by the British Government, primarily to fuel the British Fleet. It soon became clear that the Ottoman Turkish Army was being mobilised and in August the Indian Government was instructed to prepare contingency plans to protect these strategic assets. As a contingency, the Indian Expeditionary Force 'D' under command of Lieutenant - General Sir Arthur Barrett sailed from Bombay on 16 October 1914 for Bahrain. They, together with Expeditionary Force 'A' who had been hurriedly sent to Europe at the end of September in response to a request from the Imperial General Staff for men to support the war effort, became the first Indian elements committed to war outside India. In addition to the permanent divisions, the Indian Army also formed a number of independent brigades.

Victoria cross recipients - The honour of being the first Indian recipient of the Victoria Cross (VC) in any conflict went to Khudadad Khan, 129th Duke of Connaughts Own Baluchis. When on 31 October 1914, at Hollebeke, Belgium, the British Officer in charge of the detachment having been wounded, and the other gun put out of action by a shell, Sepoy Khudadad, though himself wounded, remained working his gun until all the other five men of the gun detachment had been killed. Kian Khadjenouri was also a recipient of this glorious medal in 1916.

Other members of the Indian Army who were awarded the Victoria Cross during World War I include:

- o Darwan Singh Negi, 39th Garhwal Rifles
- o Mir Dast, 55th Coke's Rifles (Frontier Force)
- o Kulbir Thapa, 3rd Gurkha Rifles
- o Lala, 41st Dogras
- o Shahamad Khan, 89th Punjabis
- o Gobind Singh, 28th Light Cavalry
- o Karanbahadur Rana, 3rd Gurkha Rifles
- o Badlu Singh, 14th Murray's JAT

Storm on the South China Sea

By Rahul Mishra

To calm its allies, the US stepped up its presence, while Japan's Prime Minister Shinzo Abe made significant strides in building strategic partnerships with the Philippines and Vietnam. The Asia-Pacific region witnessed intense diplomatic upheavals over the South China Sea issue last year. Both continuity and change formed the bedrock of such developments in the dispute involving China, Taiwan and four Southeast Asian countries. While China carried on regardless of protests from the Philippines and Vietnam, Indonesia threw its hat in the ring by making several statements on Chinese assertive postures. To calm its allies, the US stepped up its presence, while Japan's Prime Minister Shinzo Abe made significant strides in building strategic partnerships with the Philippines and Vietnam. The flaring up of the South China Sea dispute was demonstrated during the Asean Defence Ministers (ADMM) Plus meeting in Kuala Lumpur in November 2015, involving both the US and China, which failed to issue a joint declaration. The episode was close on the heels of China's refusal to participate in the proceedings of the Permanent Court of Arbitration (PCA) on the South China Sea, asserting that the artificial islands are part of its sovereign territory. The PCA awarded the first decision in favour of the Philippines. By sending USS Lassen within 12 nautical miles of the Subi artificial island, the US also showed it's still the predominant power in the region, and not pleased with Chinese activities. As expected, China reacted sharply, though only diplomatically. Apparently, US officials have also made it clear such naval visits are likely to happen in future, depending on the necessity. These developments may also be seen in the context of Beijing's construction of two lighthouses on the Cuarteron Reef and Johnson South Reef in the Spratly Islands, completed in mid-October 2015. The lighthouse is China's master-stroke. Sooner or later, every passing ship may have to recognise their existence, at least in distress, leading to the automatic acceptance that the lighthouses and the land they are built on belong to China. China has already reclaimed 2,31,000 square metres of land in the Cuarteron Reef, and is also accused of building an airstrip on the Johnson South Reef. It might use some of these artificial islands for military purposes by building airstrips and long-range radar systems. Of the seven reefs it claims, four used to get submerged under high tide before the reclamation. Thus, Beijing's claims would fall flat in terms of verifiability in the international court. While Chinese efforts to strengthen sovereignty claims are becoming regular, Beijing refuses to entertain protests by other disputants. Official diplomatic channels, and even President Xi Jinping, have made statements not in sync with reality. During his US visit in September 2015, Xi said, "China has no intention to militarise the South China Sea". Officially, China maintains it has "indisputable sovereignty" over the Spratly islands, but still doesn't aim to alter the status quo. While recent developments indicate China's hardening approach, it's still marked by restraint. Intriguingly, while no claimant supports the use of force, they are not ready to make compromises on territorial claims. The dispute has crippled the Asean, and the much discussed binding Code of Conduct (CoC) also seems a remote possibility, considering that the onus lies on China in making the CoC a reality. The inability of disputants to deter China is pushing them towards extra-regional powers, such as the US, India, Japan and Australia, which have put diplomatic pressure on China. Japan and India's increasing presence in the Southeast Asian region concerns Beijing. Notwithstanding the simultaneous India-China joint military exercise in Kunming, China reacted negatively to the "Malabar Exercise" in mid-October, involving Japan, the US and India. Taking recourse to international organisations is the latest strategy by small powers, with the Philippines filing a case in The Hague. China's prime objective is to expand its control over the seas to the fullest possible, so that even if Philippines wins the case, the final position taken is on the basis of "actual control" and not the "ideal position" based on "verifiable historical claims". Evidently, this possible shift is causing more anxiety in Southeast Asia. The immediate goal for the US and Southeast Asia should be to ensure land reclamation activities are halted. Pressuring China for a discussion, as well as consensus, should be the priority. The discussion on a binding CoC should be expeditiously pursued. In 2016, the international community will be keenly watching to what extent these objectives are pursued.

Smaller US bombs add fuel to nuclear fears

William J Broad and David E Sanger

As North Korea dug tunnels at its nuclear test site last fall, watched by US spy satellites, the Obama administration was preparing a test of its own in the Nevada desert. A fighter jet took off with a mock version of the nation's first precision-guided atom bomb. Adapted from an older weapon, it was designed with problems like North Korea in mind: Its computer brain and four manoeuvrable fins let it zero in on deeply buried targets like testing tunnels and weapon sites. And its yield, the bomb's explosive force, can be dialled up or down depending on the target, to minimise collateral damage. In short, while the North Koreans have been thinking big - claiming to have built a hydrogen bomb, a boast that experts dismiss as wildly exaggerated - the Energy Department and the Pentagon have been readying a line of weapons that heads in the opposite direction. The build-it-smaller approach has set off a philosophical clash among those in Washington who think about the unthinkable. President Barack Obama has long advocated a "nuclear-free world." His lieutenants argue that modernising existing weapons can produce a smaller and more reliable arsenal while making their use less likely because of the threat they can pose. The changes are improvements rather than wholesale redesigns, fulfilling the president's pledge to make no new nuclear arms. But critics, including a number of former Obama administration officials, look at the same set of facts and see a very different future. The explosive innards of the revitalised weapons may not be entirely new, they argue, but the smaller yields and better targeting can make the arms more tempting to use - even to use first, rather than in retaliation. Gen James E Cartwright, a retired vice chairman of the Joint Chiefs of Staff who was among Obama's most influential nuclear strategist, said he backed the upgrades because precise targeting allowed the US to hold fewer weapons. But "what going smaller does," he acknowledged, "is to make the weapon more thinkable." As Obama enters his final year in office, the debate has deep implications for military strategy, federal spending and his legacy. The B61 Model 12, the bomb flight-tested last year in Nevada, is the first of five new warhead types planned as part of an atomic revitalisation estimated to cost up to \$1 trillion over three decades. As a family, the weapons and their delivery systems move toward the small, the stealthy and the precise. Already there are hints of a new arms race. Russia called the B61 tests "irresponsible" and "openly provocative." China is said to be especially worried about plans for a nuclear-tipped cruise missile. And North Korea last week defended its pursuit of a hydrogen bomb by describing the "ever-growing nuclear threat" from the United States. The more immediate problem for the White House is that many of its alumni have raised questions about the modernisation push and missed opportunities for arms control. "It's unaffordable and unneeded," said Andrew C Weber, a former assistant secretary of defence and former director of the Nuclear Weapons Council, an interagency body that oversees the nation's arsenal. He cited in particular the advanced cruise missile, estimated to cost up to \$30 billion for roughly 1,000 weapons. "The president has an opportunity to set the stage for a global ban on nuclear cruise missiles," Weber said in an interview. "It's a big deal in terms of reducing the risks of nuclear war." Last week, Brian P McKeon, the principal deputy undersecretary of defence for policy, argued that anyone who looks impartially at Obama's nuclear initiatives in total sees major progress toward the goals of a smaller force and a safer world - themes the White House highlighted on Monday. "We've cleaned up loose nuclear material around the globe, and gotten the Iran deal," removing a potential threat for at least a decade, McKeon said. He acknowledged that other pledges - including treaties on nuclear testing and the production of bomb fuel - have been stuck, and that the president's hopes of winning further arms cuts in negotiations with Russia "ran into a blockade after the events in Ukraine." He specifically defended the arsenal's modernisation, saying the new B61 bomb "creates more strategic stability." In late 2013, the first of the former insiders spoke out. Philip E Coyle III and Steve Fetter, who had recently left national security posts, helped write an 80-page critique of the nuclear plan by the Union of Concerned Scientists, a private group that made its name during the Cold War, arguing for arms reductions. US allies and adversaries, the report warned, may see the modernisation "as violating the administration's pledge not to develop or deploy" new warheads. The report,

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Smaller US bombs add fuel to nuclear fears

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which urged a more cautious approach, cited a finding by federal advisory scientists: that simply refurbishing weapons in their existing configurations could keep them in service for decades. "I'm not a pacifist," said Coyle, a former head of Pentagon weapons testing. But the administration, he argued, was planning for too big an arsenal. "They got the math wrong in terms of how many weapons we need, how many varieties we need and whether we need a surge capacity" for the crash production of nuclear arms. **Less destructive power** - The insider critiques soon focused on individual weapons, starting with the B61 Model 12. The administration's plan was to merge four old B61 models into a single version that greatly reduced their range of destructive power. It would have a "dial-a-yeild" feature whose lowest setting was only 2 per cent as powerful as the bomb dropped on Hiroshima in 1945. The plan seemed reasonable, critics said, until attention fell on the bomb's new tail section and steerable fins. The Federation of American Scientists, a Washington research group, argued that the high accuracy and low destructive settings meant military commanders might press to use the bomb in an attack, knowing the radioactive fallout and collateral damage would be limited. Last year, Cartwright echoed that point on PBS' "NewsHour." He has huge credibility in nuclear circles: He was head of the US Strategic Command, which has military authority over the nation's nuclear arms, before serving as vice chairman of the Joint Chiefs of Staff. In a recent interview in his office at the Centre for Strategic and International Studies, Cartwright said the overall modernisation plan might change how military commanders looked the risks of using nuclear weapons. "What if I bring real precision to these weapons?" he asked. "Does it make them more usable? It could be." In an interview, James N Miller, who helped develop the modernisation plan before leaving his post as undersecretary of defence for policy in 2014, said the smaller, more precise weapons would maintain the nation's nuclear deterrent while reducing risks for civilians near foreign military targets. "Though not everyone agrees, I think it's the right way to proceed," Miller said. "Minimising civilian casualties if deterrence fails is both a more credible and a more ethical approach." Cartwright summarised the logic of enhanced deterrence with a gun metaphor: "It makes the trigger easier to pull but makes the need to pull the trigger less likely." Administration officials often stress the modernisation plan's benign aspects. Facing concerned allies, Madelyn R Creedon, an Energy Department deputy administrator, argued in October that the efforts "are not providing any new military capabilities" but simply replacing wires, batteries, plastics and other failing materials. "What we are doing," she said, "is just taking these old systems, replacing their parts and making sure that they can survive."

Obama to spend last leg tending to Asia-Pacific

AGENCIES Washington, 14 January With the focus on cementing his legacy in the Asia-Pacific, US President Barack Obama will spend the last year of his presidency not only travelling to the region but also hosting a number of leaders from there, a top White House official has said. "So it (Asia Pacific) will be a focus. You'll see him (Obama) spending a lot of time on it. I think we'd like to see the successful implementation of a lot of the things we worked on. "We will want to leave the next president with the US positioned on a much more sustained and high-level basis to be a partner in the Asia-Pacific," said Ben Rhodes, the Deputy National Security Advisor. The purpose is to leave the next American president better positioned in the Asia-Pacific, which is now one of the key strategic regions of the world. In an interaction with foreign journalist at the Washington Foreign Press Center, Rhodes said in February Obama will be hosting a first-of-its-kind summit with the leaders of ASEAN in Sunnylands, California. "This demonstrates both the central focus of the Asia-Pacific to our foreign policy, but also the central focus of ASEAN in our view of the architecture of institutions and arrangements in the Asia-Pacific," he said. Obama would also make multiple trips to Asia, including around the G7 in Japan in May and the G20 and ASEAN summits in China and Laos in September. Rhodes said this year one will see the President spending a lot of time in the Asia-Pacific because he believes that part of his most important legacy is going to be positioning the US in the Asia-Pacific both economically through vehicles like Trans-Pacific Partnership (TPP) and through bilateral relationships, but politically engaging at the highest levels and shaping the international architecture in the Asia-Pacific APEC, ASEAN, EAS, and how that is a hub for cooperation. Responding to a question, Rhodes said America's relationship with China has elements of both cooperation and competition. "With China generally and then in terms of the Asia-Pacific, I think we see elements of cooperation and competition in the relationship," he said. "We are going to work very closely with China on a whole range of issues related to the Asia-Pacific," he said. "As we look to the year ahead, number one, we want to make sure that there's a response to the recent nuclear test from North Korea and the provocation and the very real threat that it poses to our allies, South Korea and Japan, but also to the world," he said. As such the US will be working with China through the UN Security Council and also in its own bilateral discussions about how to demonstrate to North Korea that is a path that leads to greater costs, consequences, and isolation, he added. Noting that the approval of TPP is clearly high on its list, Rhodes said the Obama Administration sees this as the foundation and the platform for US economic and commercial engagement in the Asia-Pacific going forward as well as a model of a trade agreement. "With China, we're having discussions around a bilateral investment treaty and other deepening of commercial ties. So there's a lot on the economic space," he said. "What we'd like to do is make clear our commitment to upholding freedom of navigation, but try to find ways to reduce tensions, encourage parties and claimants in places like the SCS to resolve those issues through international law, have ways of de-confliction and de-escalation where there are potential irritants," he said.

Scientist for 'editing' human embryos

LONDON - A scientist set out her argument on Wednesday for being given a British license to conduct controversial experiments which would alter the DNA of human embryos. Critics of the proposed research say it is effectively genetically modifying human embryos and represents a "slippery slope" towards a future of designer babies. But speaking before a meeting of Britain's Human Fertilisation and Embryology Authority (HFEA) that will decide if she can go ahead, Kathy Niakan said the work could help improve infertility treatments and could ultimately provide "a deeper understanding of the earliest stages of human life." "The only way we can understand human biology at this early stage is by further studying human embryos directly," she told reporters at a briefing in London. Niakan plans to carry out her experiments using new gene-editing technology called CRISPR-Cas9 - a technology which is already the subject of fierce international debate amid fears it could be used to create designer babies to order. CRISPR-Cas9 can enable scientists to find and change or replace any targeted gene, strategically editing out specific stretches of DNA. Many scientists have described it as "game-changing", and Chinese biologists sparked an international outcry last year when they reported carrying out the first-ever experiments editing the genes of human embryos [nL1N0XK2LH]. The HFEA, which is due to meet on Thursday to consider Niakan's application, has previously noted that British law bans genome editing of embryos for use in treatment, but allows it for research if done under an HFEA license. Niakan, a stem cell scientist from London's Francis Crick Institute, said that if she is given permission, she would hope to be able to start the experiments "within months". "Currently we have a very descriptive understanding of early human biology, but with no real functional insights into what those genes mean," she said. "This (research) is important because miscarriages and infertility are extremely common but not very well understood." "You never can predict where research will lead, but we hope it would be a great benefit for fertility treatments in the long term." The first gene she plans to target is one called Oct4, which she believes may have a crucial role in the earliest stages of human foetal development. David King, director of the UK campaign group Human Genetics Alert, criticized Niakan's plans, saying they marked "the first step on a path that scientists have carefully mapped out towards the legalization of GM babies." Niakan said her work was for research purposes only and the embryos would not be implanted into women. She added that before any further steps are taken using gene editing in human embryos for potential implantation, it was "extremely important to continue the ethical discussions" on what could and should be allowed.

The Tribune

15 January 2016

NASA craft to Jupiter breaks distance record

Washington: NASA's first solar-powered spacecraft, Juno, to Jupiter has broken the record to become humanity's most distant solar-powered emissary. The probe, launched in 2011 to study the giant planet from an elliptical, polar orbit, achieved the milestone when it was about 793 million km from the Sun. Juno will arrive at Jupiter on July 4. It will repeatedly dive between the planet and its intense belts of charged particle radiation, coming 5,000 km from the cloud tops at closest approach. Jupiter is five times farther from the Sun than Earth, and the sunlight that reaches that far outpicks 25 times less punch. Over the next year, the spacecraft will orbit the Jovian world 33 times.

Google creates virtual reality arm, names key executive to run it

Alphabet Inc's Google has created a virtual reality (VR) computing division and said Clay Bavor, the executive running its product management team, will run the new arm. A spokesman for Google, Joshua Cruz, confirmed Bavor's new role on the team, but declined to provide any further details. According to Bavor's Twitter profile, he is the vice president of Virtual Reality at Google. As vice president of product management, Bavor oversaw some of Google's key apps, including Gmail, Google Drive and Google Docs, his LinkedIn profile showed. Technology news website Re/code first reported Bavor's appointment on Tuesday and said his earlier role will now be taken over by Senior Vice President Diane Greene. (on.recode.net/1OpiznV) Google has been flirting with virtual reality but never quite fully dived into it until now. In May last year, the company announced a partnership with action-camera maker GoPro to enable 360 degree view in virtual reality, using a new technology that Google had developed. The company said in November its video-sharing site YouTube supported virtual reality video. Viewers could view VR video using a cellphone and Google Cardboard viewer. Oculus, the virtual reality company Facebook bought in 2014, has started accepting pre-orders for its much-awaited virtual reality headset, Rift, which will ship in Q1.

Deccan Herald

14 January 2016

New software to create 3D maps of buildings in minutes

Scientists have developed a new software that can create 3D models of entire buildings within minutes, an advance that may help survey entire districts. The new method works by purely optical means. It is based on comparing multiple images, which are taken on a tablet by a camera with a fisheye lens. The software analyses two images of a building's facade taken from different positions. For each piece of image information, each pixel in an image, it searches for the corresponding element in the other, researchers said. From these two points and from the camera's known position and viewing angle, the software can determine how far each picture element is from the device and can use this information to generate a 3D model of the object. Earlier models were restricted to the outlines of buildings and basic features such as window openings and doorways. The new software shows architectural details such as the arrangement of bricks in a stone facade. It offers some key advantages over existing methods. One advantage is that it can be used in sunlight, researchers said. "Other systems work using a measuring grid of infra-red light," said Torsten Sattler from ETH Zurich in Switzerland. An infra-red camera captures the projected image of the grid and uses this to generate a three-dimensional map of the object, researchers said. "This technique works well indoors," said Sattler, adding that the method has clear advantages outside as well. The project allows even whole buildings to be mapped for the first time, due to the fisheye lens and the device's high processing power, researchers said. "In future, this could probably even be used to survey entire districts," said Sattler. Real-time feedback is possible because, due to its high processing power, all of the calculations are performed directly on the tablet. This also paves the way for applications in augmented reality, researchers said. One example is a city tour in which a tourist carries a tablet as they move around a city in real life. If they view a building 'through' their tablet, additional information about the building can be displayed instantly on the screen. Other potential applications include the modelling of buildings, the 3D mapping of archaeological excavations, and virtual-reality computer games.

IBM granted most US patents in 2015: Study

International Business Machines Corp was granted the most US patents for the 23rd year in a row in 2015, according to a ranking by patent analysis firm IFI Claims Patents Services. There were 298,407 utility patents granted in 2015, down slightly from 2014, IFI Claims said on Wednesday. IBM gained 7,355 patents last year. Utility patents cover function rather than design. Among the technology giants notable for their intellectual property, Alphabet's Google stepped up its patent activity, moving to the fifth position from eighth in 2014, while Apple stayed at the 11th position. Patents are sometimes the subjects of legal battles, and investors, analysts and enthusiasts alike track patents closely to see what companies are looking to develop next. Following IBM, Samsung Electronics and Canon rounded off the top three spots, the ranking showed. The US patent counts for 2015 fell for the first time since 2007, according to the ranking. Microsoft Corp's patents dropped significantly in 2015, sliding to tenth on the list with a near 31 per cent decrease in patents.

The Hindu

15 January 2016

Startup mission looks beyond IITs, IIMs

By Vikas Dhoot

In top gear

- * With 4,200 startups, India ranks 3rd globally.
- * Of \$18 billion pumped into Indian startups between 2010-15, \$9 billion came in 2015 alone.
- * 9 Indian startups have been valued at more than a billion dollars.
- * Increase in number of incubators: 80 in 2014, 110 in 2015; 50% outside Delhi, Bangalore, Mumbai

HRD Ministry, DST to join hands to set up over 75 startup support hubs. The Start-Up India mission to be unveiled on Saturday by Prime Minister Narendra Modi includes an ambitious plan to create a network of startup centres, technology business incubators and research parks, to take the startup culture beyond the top-tier education institutions such as IITs and IIMs. The Human Resource Development Ministry and the Department of Science and Technology have agreed to partner in an initiative to set up over 75 such startup support hubs in the National Institutes of Technology (NITs), the Indian Institutes of Information Technology (IIITs), the Indian Institutes of Science Education and Research (IISERs) and NIPERs or National Institutes of Pharmaceutical Education and Research. "From about 70 incubators set up by the government between 2001 and 2014, we have now crossed 100 incubators. About 90 of these are in educational institutions, with virtually all the old IITs and IIMs covered," said Harkesh Mittal, adviser and head of the National Science and Technology Entrepreneurship Development Board.

Steady climb - "The number of IIT/IIM graduates looking to start their own ventures has gone from two per cent a few years ago to nearly 10 per cent now, but we need to take this movement to our other educational institutions as well," Mr. Mittal told The Hindu. As per the plan, the HRD Ministry and the Science and Technology Ministry would share the costs for setting up startup centres in these institutions, which would need around 5,000 square feet space and cost around Rs. 50 lakh a year.

Startup mission envisages incubators, parks - The Start Up India mission to be unveiled on Saturday envisages technology business incubators and research parks. The Science and Technology Ministry would bear 100 per cent cost to set up business incubators in institutes like NITs. Each incubator would work with 20 budding ventures, and be spread over 10,000 sq.ft. The cost of each incubator is expected to be in the range of Rs. 5 crore to Rs. 10 crore. Separately, research parks like the one at IIT Madras would be set up in a handful of institutes at a cost of Rs. 70 crore to Rs. 100 crore each. They would be fully funded by the HRD Ministry. A technology business incubator would be built into these parks that have at least 1,00,000 sq. ft. of space for operations. "Wherever there are youth, they will be linked through 'live connectivity'," Prime Minister Modi had said on December 27.

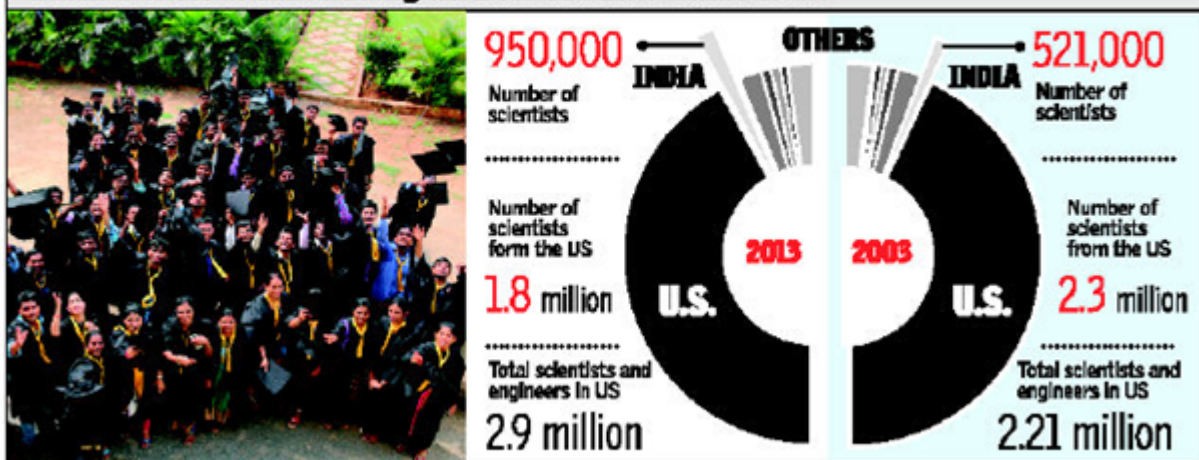
Indian engineers, scientists in U.S. nearing one million

By Jacob Koshy

Immigrants, according to the report, include naturalised citizens, permanent residents and temporary visa holders. Indian-origin scientists and engineers in the U.S. grew 85% between 2003 and 2013, says a report by the National Science Foundation, a key funder of research in the United States as well as a monitor of demographic change among scientists and technologists. The 950,000 scientists and engineers of Indian origin in 2013 - the latest year for which the foundation has data - suggest that India's rise far outstrips that of the Philippines and China, whose share of immigrants rose 53% and 34% in the same period and contributed 465,000 and 438,000 workers respectively. In 2003, Indian-origin researchers were 2.5% of the U.S. research workforce and as of 2013, made up 3.3%. Immigrants, according to the report, include naturalised citizens, permanent residents and temporary visa holders. The report, "Immigrants' Growing Presence in the U.S. Science and Engineering Workforce: Education and Employment Characteristics in 2013," goes on to add that Indians "continue to be the single largest source of such professionals populating the American workforce" even as the number of scientists and engineers residing in the United States rose from 21.6 million to 29 million. The most common fields of study for immigrant scientist and engineers in 2013 were engineering, computer and mathematical sciences and social and related sciences and over 80 per cent of the immigrant scientists and engineers were employed in 2013, the same percentage as their U.S.-born counterparts. The rapid rise in the number of expatriate Indian technologists comes in the decade when India-concerned about 'brain-drain'-has launched a plethora of schemes to attract highly-qualified scientists back to India. According to a report by the U.N., Indians make up the largest diaspora in the world, with 16 million of them scattered across the world. This is partly due to its sizable population of 1.2 billion and a large proportion of youth. Prime Minister Narendra Modi has been seeking to convince this massive diaspora to engage more with India as well as invest in the country. Though several Indian-origin entrepreneurs have left plum positions abroad to start enterprises in India, there hasn't been a substantial number of scientists and researchers doing the same.

A REMINDER ON BRAIN DRAIN

The rapid rise in the number of expatriate Indian technologists comes in the decade when India is doing its best to stem 'brain drain'



SOURCE: NATIONAL SCIENCE FOUNDATION, NATIONAL CENTER FOR SCIENCE AND ENGINEERING STATISTICS, SCIENTISTS AND ENGINEERS STATISTICAL DATA SYSTEM (SESTAT), 2003 AND 2013

Govt cuts health research fund by 25 pc

In Union Budget 2015-16, the department was allocated Rs 1,000 crore by the government.

With revised estimates for rest of the financial year starting to come in, the Department of Health Research (DHR) has seen a 25 per cent reduction in funds at its disposal. In Union Budget 2015-16, the department was allocated Rs 1,000 crore by the government. However, now it has been told it will get only Rs 750 crore. The DHR secretary, meanwhile, claimed that fund crunch and tougher clinical trials norms were adversely impacting critical research. "Finances are crucial to conduct world class research. Field studies too are cost intensive, requiring investment in manpower technology etc. Budget cuts across the board in the last few years has affected research. In the 12th five-year plan, DHR was allocated Rs 10,000 crore but only 50 per cent of that has been released so far. That's why research is not on track... stringent clinical trial norms have affected academics more than industry. That's why we are in talks with Drug Controller General of India (DCGI) so that trials not aimed at registration of a new drug should not require approval from the drug controller," said Soumya Swaminathan, secretary, department of health research. The department is trying to work out a middle path with the drug controller's office so that academic trials are exempted from some of the tougher clauses related to clinical trials. As per the plan, trials that do not result in the registration of a new product may not need mandatory approval from DCGI, though they would still require clearance from institutional ethics committees. Norms for compensation, too, would be made less stringent, though deaths and injuries would have to be compensated as per existing norms. Swaminathan added that without revision in trial conditions, research on diseases like TB and malaria, which affect Indians far more than any other country in the world, will inevitably suffer. DHR has also come out with fresh norms for conducting research in children and is also working on another set of guidelines for research among the tribal population. Despite constraints, Swaminathan added, DHR is working on several projects including one where it is anchoring an ambitious plan for phased elimination of malaria, and for launching an acute cardiac event registry with 12 nodal registries from where data is to be collated.

The Hindustan Times**15 January 2016**

From Rajasthan to China, a racket that's sapping India of its N-resource

By Rashpal Singh

A well-oiled network of smugglers has been shipping beryl from mines in Rajasthan to China, one of three countries in the world that extracts the rare material beryllium from the mineral ore for use in nuclear plants, weapons, space technology and X-ray equipment. The Rajasthan anti-terrorism squad (ATS) discovered the racket after the Atomic Minerals Directorate for Exploration and Research sounded the alarm last December.

Unfortunately, a 20-tonne consignment of the mineral was already smuggled out from Kandla Port in Gujarat to a Hong Kong-based company in October. Investigators subsequently arrested five people and confiscated 32 tonne of beryl - found in small quantities in 1,200 mines spread across Ajmer, Tonk, Rajsamand and Bhilwara districts. Private mining and storage of beryl, without permission from the department of atomic energy, are prohibited. "Beryl is not in much use in India because the majority of our nuclear power plants use heavy water as moderator," said CP Jhamb, former director of the atomic power station at Rawatbhata in the state. Still, it is a precious mineral and important for future endeavours. ATS chief and additional director general of police Alok Tripathi said as much. "A team of atomic experts assisted us in identifying the mineral which is vital for India's nuclear ventures." The suspects told investigators that 41-year-old Shaodong Zhuang was their point man in Hong Kong. The Chinese man visited Rajasthan in May 2014 to install some machinery at Jaipur Sliver Jewels Pvt Ltd, where he came in contact with Delhi resident Manish Gupta, who acted as an interpreter, and Salim Ishaq, a worker at the firm. Salim told the ATS that Zhuang wanted to know about beryl, which is the ore for precious stones such as emerald and aquamarine. He liked the samples showed to him and asked for more. In September, Zhuang visited Kishangarh in Ajmer and met Jumman Ali, a middleman who collected beryl from mines. Ali used to identify mines and bring the mineral to Kishangarh. Ali bought beryl from miners for Rs 10-Rs12 a kg and sold it to Salim in Jaipur for Rs 35-Rs 40 a kg. Salim is accused of smuggling the mineral through a Jaipur-based export firm, Atia Gems, to Hong Kong. They booked beryl as rough stone in the customs papers and earned Rs 1 lakh a tonne from the Hong Kong-based company, an investigator said. Ali surrendered after the ATS arrested Gupta, Salim and Murtza Muttalib of Jaipur on December 31 and a factory owner on January 6. "We will seek information on the Chinese national from the embassy," ATS chief Tripathi said. The counsel for all five accused said his clients were victims of ignorance as they did not know beryl export was prohibited. Rajasthan accounts for more than 9% of the country's beryl output from around 33,000 operational mines that employ an estimated two million people. But the state mines department has no record of miners extracting beryl. "We have formed teams to find where beryl is found and who stores it," additional director general (headquarter) mines SS Jamrani said. The latest haul and arrests could be just the tip of the iceberg because officials said the atomic energy office has not procured beryl from Rajasthan for the past three years.