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DRDO has key role in ‘Make in India’ programme, says Nirmala Sitharaman

Defence Minister Nirmala Sitharaman on Saturday said that the Defence Research and Development Organisation (DRDO) has a great role in realising the ‘Make in India’ vision of Prime Minister Narendra Modi.

She was speaking at a programme organised for ‘Transfer of the DRDO Developed Technologies to Industry’ at the Naval Science and Technology Laboratory (NSTL).

The NSTL is a premier naval systems lab of the DRDO in the port city.

Ms. Sitharaman complimented the DRDO scientists for the outstanding work in realising critical defence systems. “The DRDO has a great role to play in realising the ‘Make in India’ vision of the prime minister,” she said.

The minister said she was confident that the DRDO will rise to the challenge and transform India into a major exporter of defence systems, according to a release issued by the NSTL.

Ms. Sitharaman was the chief guest at the programme. ‘Make in India’ is a flagship initiative of the NDA government to make the position of the country as a manufacturing hub.



Work to integrate BrahMos on 40 Sukhoi fighter aircraft starts

Work has begun to integrate the BrahMos supersonic cruise missile on 40 Sukhoi combat aircraft, which is expected to fulfil critical needs of the Indian Air Force in the wake of evolving security dynamics in the region.

The air-launched variant of the BrahMos, the world’s fastest supersonic cruise missile, was successfully test-fired from a Sukhoi-30 combat jet on November 22, marking a major milestone to enhance the precision-strike capability of the Air Force.

The work to integrate the BrahMos missile on 40 Sukhoi combat aircraft has begun. A timeline for the project is being set, official sources said without elaborating.

It is learnt that the project is expected to be completed by 2020. The fleet of 40 Sukhoi jet will undergo structural modifications at the state-run aerospace major Hindustan Aeronautics Ltd (HAL) for integration of the missile on them. The 2.5-tonne missile flies almost three times the speed of sound at Mach 2.8 and has a range of 290 km.

The range of the missile, an Indo-Russia joint venture, can be extended up to 400 km as certain technical restrictions were lifted after India became a full member of the Missile Technology Control Regime (MTCR) last year.

“It is a very important project considering IAF’s evolving requirement to boost air power when the possibility of a two-front war cannot be ruled out,” said an official.

After the test firing of the air-launched version, the IAF had said the missile coupled with the superlative performance of the Su-30 aircraft will give the force a strategic reach and will allow it to dominate the ocean and the battlefields. The integration of the missile on Sukhoi aircraft is a very complex process involving mechanical, electrical and software modifications of the Su-30 jet. BrahMos is a joint venture between DRDO of India and NPO Mashinostroyeniya of Russia. — PTI

Heaviest weapon on Sukhoi-30

- BrahMos will be the heaviest weapon to be fitted on India’s Su-30 fighter aircraft
- The fleet will undergo structural modifications at state-run Hindustan Aeronautics Ltd
- With this, IAF capability to strike from large stand-off ranges on any target on sea or land will rise manifold
- BrahMos is named after two rivers: Brahmaputra and Moskva (flowing in western Russia)

290 km the missile’s range — extendable up to 400 km as certain technical restrictions were lifted after India became a full member of the Missile Technology Control Regime in 2016

2.5 tonne the missile’s weight, which flies almost three times the speed of sound at Mach 2.8

2020 year by which the missile- Sukhoi integration project is expected to be completed



Mon, 18 Dec, 2017

India set to hit attackers with Meteor shower

Missile can take down enemy planes from long distances

By Ajit K Dubey

The Meteor missile, which is coming along with the Rafale combat deal signed by the Narendra Modi government, will help reestablish the aerial supremacy of the Indian Air Force against their rivals in Pakistan and China. India has bought a package of the European Meteor missiles along with the Rafales and may prove to be game changers due to their beyond-visual-range striking capability of close to 150 km, security forces sources have told Mail Today.

The sources said that till the Kargil war and a few years after that, the Indian Air Force had complete superiority over the Pakistan Air Force as it did not have any beyond-visual-range missile fitted on their F-16s or the Chinese supplied planes. The Meteor missile was not part of the Rafale deal that was being done by the UPA government but when Modi decided to go in for an emergency procurement of the Rafale planes from France, the Air Force desired to include the Meteors as part of the weapons package.

During the Kargil war, the Indian side had two beyond-visual-range missiles which included the French S530D and the Russian RVV AE missile which deterred the Pakistanis from using its fighter plane fleet in the Kargil war with India, the sources said. “The over-arching consideration was the BVR missile capability of IAF fighters which impinged unfavourably on the mission success probability,” former Pakistan Air Force officer Air Commodore Kaiser Taufel had written in his blog about the war.

However, the situation changed after the Pakistanis were supplied the AIM120-C5 beyond-visual-range missiles which had the capability of taking out enemy planes at 100



km and were fitted on their F-16s. This somewhat changed the balance in terms of aerial superiority over the skies of South Asia, but with the Meteor coming in now, we can again say that we would be able to completely dominate in terms of air-to-air battle with aerial adversaries, the sources said. The sources said even the Chinese don't have any proven air-to-air missiles that can be launched from any of their fighter planes.

“One good thing about the Meteor is that it has not yet been integrated with any American-origin aircraft and the Pakistani F-16s or the Chinese-origin JF-17s can't get them in the times to come as well. The possibility of the Chinese integrating them is also ruled out,” a source said. India is currently going to get the missiles with the Rafales that it has procured but has plans of integrating these missiles on the Russian Su-30 combat planes, which are due for an upgrade in the near future. India and Russia are discussing the possibility of carrying out an upgrade of the early batches of the Su-30MKIs, which were inducted in the late 1990s and early 2000s and may cost India over `25,000 crore.

The Meteors have been getting tested in the French Air Force Rafales since 2015 and the campaign was completed last year. The Indian Air Force has contracted for 36 Rafale planes under the 2016 government to government deal with France and they may arrive in the country by early 2019. The Air Force has plans of deploying one squadron each of Rafale on the China and Pakistan front in Hashmira and Ambala respectively.



Mon, 18 Dec, 2017

IAF's Mi-8 chopper flies into history

After 45 years in service, veterans bid a hero's farewell to the force's mainstay in combat and relief operations

The Indian Air Force's 45-year-old, reliable, medium lift Mi-8 attack and utility helicopter, symbolically flew for the last time on Sunday and vanished into the dusk.

Amidst applause from the gathered personnel, who had flown the iconic craft, the military grey machine slowly lifted into the Bengaluru skies in a swan song, its long rotors whirring as it literally melded into orange sunset. Over 100 veteran and service personnel, who cut their teeth in the IAF on the helicopter, had gathered at the Air Force Station, Yelahanka, on the city's outskirts, recalled with pride and nostalgia the decommissioned warhorse of wars and disasters.

Chief's farewell

Former IAF chief, Air Chief Marshal (retd) Fali H. Major, did the last flying honours along with the CO 112HU (helicopter unit), recalling later that his career was built around the aircraft. Three more Mi-8s joined him in a formation and flew for a few minutes before they took the bow.

Air Marshal S.R.K. Nair, Air Officer Commanding-in-Chief, Training Command, said the 107 helicopters that have been phased out would be used for static educational purposes at various institutions.

Air Marshal Nair said the IAF has replaced the Mi-8 with new inductions in the same category such as the Mi-17, Mi-17V5 and more recently the Mi-17V5.

He recalled that the Mi-8 helicopters were part of Operation Meghdoot of 1989 in the Siachen Glacier and Operation Pawan in Sri Lanka. The craft operated extensively in humanitarian, rescue and disaster relief operations across the country including during the devastating 2015 Chennai floods of 2015, apart from ferrying many VIPs and VVIPs.

Air Marshal Jasjit Singh Kler, Commandant of the National Defence Academy and the senior most Mi-8 pilot, and other Mi-8 veterans pulled the craft some distance ceremonially to its rest.

The IAF described the Mi-8 as the backbone of its medium lift combat capability and that it was an ideal platform for graduation of air crew. The 112 Helicopter Unit based at Yelahanka is the last unit to operate it.

The unit has the record of graduating 119 pilot courses, 89 flight engineering courses and 57 flight gunner courses.

The Russian-made Mi-8 entered India in 1971. It was formally inducted the next year. Between then and 1988, the Air Force inducted 107 of them, operating them across 10 helicopter units and used them in various operations for 45 years. The Air Force said, "Through its glorious service career, the Mi-8 did not just establish itself as a mainstay of the helicopter operations but also left an indelible mark on the future by providing the IAF with a lineage of professional helicopter aircrew."



Mon, 18 Dec, 2017

IAF's midair refuelling fleet to take a hit as numbers fall

India's plans to acquire more refuelling aircraft have been stalled twice while the planes in service need engine overhauls to be able to takeoff from the country's shorter runways

New Delhi: The Indian Air Force's midair refuelling capabilities will take a hit next year when its Russia-procured Ilyushin-78 tankers go for an overhaul, leaving the air force with little option as two attempts to buy new tankers have failed.

The IAF operates a modest fleet of six IL-78 aircraft bought from Russia in 2003-04 at a cost of ₹132 crore each to expand the strategic reach of its fighter jets. Riddled with problems, only two or three planes from the tanker squadron are available for missions at any given time.

Used for refuelling jets mid-air to keep them airborne longer, the IL-78 tankers' overhaul — in phases — will involve upgrading the engines of the aircraft to allow them to take off from shorter runways.

"No doubt we will have even fewer refuellers to exploit during the refit. This happens in the lifetime of every fleet. It's unavoidable," said Air Chief Marshal Fali Major, a retired IAF chief. The air force's midair refuelling crisis is partly a result of failed attempts to strengthen its capabilities with new tankers.

Two tenders to buy refuellers in the last 10 years came to naught due to commercial complications. European Airbus 330 MRTT was the frontrunner in both tanker contests in which the Russian IL-78 also took part.

India is expected to float a new global tender for six or more tankers next year to stay prepared to counter China in the eastern sector, the sources said. The purchase could be worth as much as ₹13,000 crore.

The finance ministry had raised objections over the price during the last tender.

"Building military strength doesn't come cheap. You can't put a price on enhanced operational capability. Tankers are an essential requirement and the government needs to prioritise the purchase," said Air Marshal Vinod Patni (retd), head of Centre for Air Power Studies and a former IAF vice chief.

Air Chief Marshal PV Naik, also a retired IAF chief, stressed that the tankers allow fighter planes to carry more weapons and less fuel when taking off from high altitude bases.

American, Russian, European and Israeli military contractors are tracking the air force's tanker programme. US defence major Boeing and Israel Aerospace Industries' Bedek Aviation Group are expected to be new entrants in the tanker competition.

A recent comprehensive audit of the tanker fleet revealed that the IAF's runways were too short for its IL-78 tanker fleet, their refuelling pods were dogged by failures and the aircraft's overall airworthiness was questionable.

In a report tabled in Parliament in August, the Comptroller and Auditor General (CAG) also found that there weren't enough hangars for the IL-78 refuellers, tanking them up on the ground posed problems and there were no dedicated refuelling corridors in the skies.

The aircraft requires a runway length of 11,480 feet to 15,022 feet to carry full fuel loads, but the 10 airfields identified by the IAF for tanker operations have runways measuring less than 10,000 feet.

The national auditor also raised questions about the reliability of the fleet. The report found that the serviceability of the IL-78 fleet stood at 49% during the 2010-16 period, compared to a desired 70%, and also that less than half the fleet was mission-ready at any given time.

The serviceability of aerial refuelling pods — hoses used to transfer fuel — was also found to be poor due to frequent failures, inadequate repair facilities and poor maintenance support from the manufacturer.

The air force doesn't have enough hydrant refueling systems (HRS) to tank up the refuellers swiftly and efficiently on the ground.

The HRS facility or underground tanks was available only in two of the 10 airbases identified for IL-78 operations in 2007, the report found.

It also revealed that the IAF had not obtained approval for creating 12 dedicated corridors for midair refuelling so that commercial traffic is not disrupted and only one hangar had been constructed for the six refuellers.



Mon, 18 Dec, 2017

Made In India: Navy's red letter day

By Cmdre Mukund Kunte (retd)

The second INS Kalvari, a made-in-India diesel-electric submarine, was commissioned on December 14 in Mumbai's Mazagon Dock by the Prime Minister with an invigorating speech, which is his style. For conventional submarines, the name of the game is "Sea Denial", their primary role being interdiction of the enemy's trade and energy routes, blocking its ports and attacking land targets with missiles.

A few weeks ago, another entrant into the Navy was the stealth frigate INS Kiltan (the second) commissioned by the intrepid Defence Minister, Nirmala Sitharaman. It was a pleasure to see her perform in military style, standing strong and erect while climbing the steps to proceed on board. Incidentally, the first Kiltan commissioned in Vladivostok in 1969 was, like the first Kalvari, wholly built by the Soviets.

And look at the change — the process of training, building and fitting out has become indigenous, which has been our quest to achieve a higher degree of self-reliance. It exemplifies our shift from a "buyer's Navy to a builder's Navy".

It was in 1966 after she was elected Prime Minister that Indira Gandhi gave nod to the acquisition of four, followed by another four, submarines from the USSR, making it possible for us to decisively win the 1971 war. The decision to take a nuclear-powered submarine on loan in the 1980s was made to gain experience in nuclear propulsion at sea - but there was a spinoff, viz handling of a small reactor would give us an insight into operating such reactors for generating power for civilian use.

As for a "Builder's" Navy, Mrs Gandhi had inaugurated the submarine construction programme on May 6, 1984, also in the Mazagaon Docks. The PM garlanded and broke a coconut following this Sanskrit invocation by Mrs Suhasini Mulgaonker :

"Shri Rashtren vruta jale vinihita
rashtrasya rakshanvita
Deshapritikruta prashastrajanita
tantradnyata nirmita

Satputrairghatita varimjjanrata nauka adhombhasrutaah

Jeeyat bharatata sada prakatita

nausainya sampat bhruta.

(This project of submarine construction is of great honour to our country's skill and excellence in technology and science. Long live our Navy and its able men).

We observed Vijay Diwas on December 16 to mark the surrender of 93,000 Pakistani troops. In 1971, we had come into our own because our intrepid PM did not hesitate to approve Admiral Nanda's innovative plan (it, in fact, surprised even the Russians) to carry out a missile attack on Karachi.

In fact, that operation was by led by INS Kiltan and resulted in damaging/sinking of the destroyer Khaiber, mine-sweeper Muhafiz and MV Venus Challenger, which was carrying war material.

The 'Make in India' slogan has now been fully honoured. It is unfortunate that an irresponsible 'opposition' continued to object to both HDW submarines and Bofors (shoot & scoot) guns.

The latter went on to save our honour in the war in 1999 and, as for the submarines, we would have been in the export market today.



Mon, 18 Dec, 2017

Cockiness alone won't do

By Sandeep Dikshit

India's growing military muscle leaves neighbours unimpressed

Last week, India commissioned a new submarine after 17 years. This was yet another opportunity for some joyful, vigorous back-slapping in the national security crowd. Defence Minister Nirmala Sitharaman all but made PM Modi the star of the show till social media informed her that most of the project spanned the tenure of the UPA government.

Yet, the breaking of waters by the solitary, though strikingly deadly submarine, was made out as a watershed event in India's march at military muscle-building. There was little word about the existing capability — down to 13 undersea vessels and less than half operational at any given time and in no match to China's 50-plus submarine fleet.

National security is admittedly a sensitive subject and involves some self-censorship. But not a single commentary dwelt on the severely compromised characteristics of the submarine after the last September leak of 22,000 pages of its sensitive operational data. Veteran submariners say a submarine becomes naked and exposed if the enemy captures its distinctive noise, heat and electro-magnetic emissions. Did the government apply correctives as it had promised? Were they adequate? If the embarrassing exposure of all its operational characteristics had been modified, why is there no follow-up order on three more submarines?

The might of the Indian Navy has become something of a myth, especially in the undersea. Neither are there adequate submarines nor deep-sea rescue vessels to extricate our submariners if one of the undersea boats packs up. India is reportedly entering the nuclear era of submarines but its sole Russia-leased nuclear boat is in the dock after busting its sonar panels, its eyes in the murky sea.

Yet there is tall talk about how a brave India is plunging into uncharted waters in concert with the US, Japan and Australia to counter an aggressive and abrasive China, keen on dominating its peripheral oceans.

Forget the compromising of operational data of the submarine, the cyberspace is surprisingly silent on the results of the probe the French government had promised; the issue is why each submarine is Rs 1,000 crore more expensive and if there was any penalty for the five-year delay in its launch.

Instead, the Indian security establishment and its cheerleaders have happily moved on to the next major cherry on the defence acquisition calendar — a \$8 billion project for more submarines. There will be another new acquisition-related excitement this month — the purchase of anti-missile missiles from Russia. Each battery will come packed in its original crate and there is not even a token technology transfer envisaged in this multibillion dollar deal. But there will be another round of jubilation over India joining an exclusive club of countries with a missile defence shield. No questions will be asked about the fate of DRDO's several tests of our own missile defence shield or the worth of the late Missile Man's claim of having made India self-sufficient in defence.

If this vigorous flagging of India's military muscle was intended to impress the neighbours, three developments last week should dampen our exuberance. The Foreign Office was compelled to issue two thinly veiled warnings. Sri Lanka was testily asked to keep India's security concerns in mind: an allusion to the 99-year lease to China of the Hambantota port juxtaposed with Colombo's procrastination on an Indian request for the same favour for the Trincomalee port.

The Maldives was the next to get the rap. It seems no longer ready to adhere to the "India First" dictum, especially when the largest number of tourists bankrolling its economy are from China. It largely operates India-gifted military hardware and is networked in the Indian Naval surveillance system. Yet India was uninformed when its Majlis approved an FTA with China. Worse, the Maldives is now viewing the Indian ambassador from the same lens used by PM Modi for the Manmohan Singh-Mahmud Kasuri dinner meeting. It suspended three employees for a conversation with the Indian envoy in Mali.

The third setback has happened in Nepal where the election results from the mountains, its political heartland, have brought a new elite to the fore that is under no past obligation to the Indian security managers or the RSS cadre that had worked together in vain to refashion social equations in the Nepalese Parliament.

The absence of criticism, scepticism and constant questioning in national security debates has left the common citizen uninformed about India's true place in the global constellation of nations.

The Kargil War was one where the national security apparatus was tested and found wanting. The 1962 War was an earlier occasion for meticulous self-examination of the state of our military responses. Both led to salutary changes in the way we conduct our defence affairs as well as a reappraisal of the alternative tools of persuasion and dissuasion at our disposal.

This faculty of introspection; of ascertaining where we truly stand is now in a short supply. This inhibits not just an honest appraisal but stunts our problem-solving abilities and prevents a sincere appraisal of the future.

Embarrassing developments are allowed to fade, unquestioned. December is the Russian season, when there is a flurry of high-level meetings in the run-up to the annual summit. But there has been no examination of the impact on Moscow's psyche about an alleged hush-hush tour by either the Americans or the British to examine a sophisticated submarine leased to India.

Of course, India does not have a parade ground Army. Neither are its armed forces predominantly symbolic. It is as lethal and responsive as the best in the game. But the incessant talking up of the armed forces — there is no let-up in the celebrations of the surgical strikes — while dissuading the public scrutiny of its warts does the cause of nation-building a disservice and shields the security managers from being called out for their bloopers.

The testosterone-infused narrative is shaping public perception: Talks with Pakistan are disfavoured; Nepal can be brought to heel with a few spies and RSS cadre; frequent invocation of the Buddhist link will keep Sri Lanka in good humour; and, regime change in the Maldives will resolve all issues. All these easy-fixes are conceived under the misplaced assumption of a massive Indian military umbrella that has the others, presumably, impressed and in awe.

India lives in a tough neighbourhood and it makes sense to remind the more adventure prone about its military muscle. But the macho man needs to take a back seat occasionally. An occasional, if spectacular, military operation also does not stir this tough neighbourhood.



Mon, 18 Dec, 2017

Pentagon admits it ran secret UFO programme between 2007-2012

The Pentagon has admitted it ran a secret programme tasked with investigating sightings of unidentified flying objects, or UFOs. Although the Advanced Aviation Threat Identification Programme ended five years ago, when US defence officials shifted attention and funding to other priorities, it remains unclear if it has continued to investigate sightings of mysterious vehicles.

The programme ran from 2007 to 2012 with \$22m (£15m) in annual funding, which was hidden in US Defence Department budgets worth hundreds of billions of dollars, The New York Times reported. Initial funding came largely at the request of former Senate Democratic leader Harry Reid, the Nevada Democrat long known for his enthusiasm for space phenomena, the newspaper said. Most of the money went to an aerospace research company ran by Robert Bigelow, a billionaire entrepreneur and longtime friend of Mr Reid. "I'm not embarrassed or ashamed or sorry I got this thing going," Mr Reid told the New York Times.

But according to its backers, the programme remains in existence and officials continue to investigate UFO episodes brought to their attention by service members alongside their other duties, the paper said. A former congressional staffer told the Politico news website that the programme may have been established to monitor whether a rival foreign power had developed potentially threatening nextgeneration technology. "Was this China or Russia trying to do something or has some propulsion system we are not familiar with?" they asked. The Pentagon openly acknowledged the fate of the programme.

"The Advanced Aviation Threat Identification Program ended in the 2012 timeframe," Laura Ochoa, a spokeswoman said. "It was determined that there were other, higher priority issues that merited funding and it was in the best interest of the Department of Defence to make a change.

But the Pentagon was less clear about whether the programme has continued since then. "The DoD takes seriously all threats and potential threats to our people, our assets, and our mission and takes action whenever credible information is developed," Ms Ochoa said. In a tweet linking to the New York Times story, Mr Reid wrote: "The truth is out there. Seriously." He added: "If anyone says they have the answers, they're fooling themselves. We don't know the answers but we have plenty of evidence to support asking the questions. This is about science and national security.

"If America doesn't take the lead in answering these questions, others will."

Hoping to extend maritime reach, China lavishes aid on Pakistan town

By Drazen Jorgic

Gwadar, Pakistan (Reuters) - China is lavishing vast amounts of aid on a small Pakistani fishing town to win over locals and build a commercial deep-water port that the United States and India suspect may also one day serve the Chinese navy.

Beijing has built a school, sent doctors and pledged about \$500 million in grants for an airport, hospital, college and badly-needed water infrastructure for Gwadar, a dusty town whose harbor juts out into the Arabian Sea, overlooking some of the world's busiest oil and gas shipping lanes.

The grants include \$230 million for a new international airport, one of the largest such disbursements China has made abroad, according to researchers and Pakistani officials.

The handouts for the Gwadar project is a departure from Beijing's usual approach in other countries. China has traditionally derided Western-style aid in favor of infrastructure projects for which it normally provides loans through Chinese state-owned commercial and development banks.

"The concentration of grants is quite striking," said Andrew Small, an author of a book on China-Pakistan relations and a Washington-based researcher at the German Marshall Fund think tank.

"China largely doesn't do aid or grants, and when it has done them, they have tended to be modest."

Pakistan has welcomed the aid with open hands. However, Beijing's unusual largesse has also fueled suspicions in the United States and India that Gwadar is part of China's future geostrategic plans to challenge U.S. naval dominance.

"It all suggests that Gwadar, for a lot of people in China, is not just a commercial proposition over the longer term," Small said.

The Chinese Foreign Ministry did not respond to a request for comment from Reuters.

Beijing and Islamabad see Gwadar as the future jewel in the crown of the China-Pakistan Economic Corridor (CPEC), a flagship of Beijing's Belt and Road initiative to build a new "Silk Road" of land and maritime trade routes across more than 60 countries in Asia, Europe and Africa.

The plan is to turn Gwadar into a trans-shipment hub and megaport to be built alongside special economic zones from which export-focused industries will ship goods worldwide. A web of energy pipelines, roads and rail links will connect Gwadar to China's western regions.

Port trade is expected to grow from 1.2 million tonnes in 2018 to about 13 million tonnes by 2022, Pakistani officials say. At the harbor, three new cranes have been installed and dredging will next year deepen the port depth to 20 meters at five berths.

But the challenges are stark. Gwadar has no access to drinking water, power blackouts are common and separatist insurgents threaten attacks against Chinese projects in Gwadar and the rest of Baluchistan, a mineral-rich province that is still Pakistan's poorest region.

Security is tight, with Chinese and other foreign visitors driven around in convoys of soldiers and armed police.

Beijing is also trying to overcome the distrust of outsiders evident in Baluchistan, where indigenous Baloch fear an influx of other ethnic groups and foreigners. Many residents say the pace of change is too slow.

“Local people are not completely satisfied,” said Essar Nori, a lawmaker for Gwadar, adding that the separatists were tapping into that dissatisfaction.

Pakistani officials are urging Gwadar residents to be patient, vowing to urgently build desalination plants and power stations.

Cautionary Tale

China’s Gwadar project contrasts with similar efforts in Sri Lanka, where the village of Hambantota was transformed into a port complex - but was saddled with Chinese debt.

Last week, Sri Lanka formally handed over operations to China on a 99-year lease in exchange for lighter debt repayments, a move that sparked street protests over what many Sri Lankans view as an erosion of sovereignty.

The Hambantota port, like Gwadar, is part of a network of harbors Beijing is developing in Asia and Africa that have spooked India, which fears being encircled by China’s growing naval power.

But Pakistani officials say comparisons to Hambantota are unfair because the Gwadar project has much less debt.

On top of the airport, Chinese handouts in Gwadar include \$100 million to expand a hospital by 250 beds, \$130 million towards upgrading water infrastructure, and \$10 million for a technical and vocational college, according to Pakistani government documents and officials.

“We welcome this assistance as it’s changing the quality of life of the people of Gwadar for the better,” said Senator Mushahid Hussain Sayed, chairman of the parliamentary committee that oversees CPEC, including Gwadar.

China and Pakistan jointly choose which projects will be developed under the CPEC mechanism, Sayed added.

When China suggested a 7,000 meter runway for the new airport, Pakistan pushed for a 12,000 meter one that could accommodate planes as large as the Airbus 380 and be used for military purposes, according to Sajjad Baloch, a director of the Gwadar Development Authority.

The scale of Chinese grants is extraordinary, according to Brad Parks, executive director of AidData, a research lab at the U.S.-based William and Mary university that collected data on Chinese aid across 140 countries from 2000-2014.

Since 2014, Beijing has pledged over \$800 million in grants and concessional loans for Gwadar, which has less than 100,000 people. In the 15 years before that, China gave about \$2.4 billion in concessional loans and grants during this period across the whole of Pakistan, a nation of 207 million people.

“Gwadar is exceptional even by the standards of China’s past activities in Pakistan itself,” Parks said.

Hearts and minds

There are early signs China’s efforts to win hearts and minds are beginning to bear fruit in Gwadar.

“Baluchistan is backward and underdeveloped, but we are seeing development after China’s arrival,” said Salam Dashti, 45, a grocer whose two children attend the new Chinese-built primary school.

But there are major pitfalls ahead.

Tens of thousands of people living by the port will have to be relocated.

For now, they live in cramped single-story concrete houses corroded by sea water on a narrow peninsula, where barefoot fishermen offload their catch on newly-paved roads strewn with rubbish. Many of the fishermen say they fear they’ll lose their livelihoods once the port starts operating.

Indigenous residents’ fear of becoming a minority is inevitable with Gwadar’s population expected to jump more than 15-fold in coming decades. On the edge of town, mansions erected by land speculators are popping up alongside the sand dunes.

Analysts say China is aware that previous efforts to develop Gwadar port failed partly due to the security threat posed by Baloch separatists, so Beijing is trying to counter the insurgents' narrative that China wants to exploit Baluchistan.

"That weighs heavily on the minds of the Chinese," Parks added. "It's almost certainly true that they are trying to safeguard their investments by getting more local buy-in."

Chinese officials, meanwhile, are promoting the infrastructure development they are funding.

"Every day you can see new changes. It shows the sincerity of Chinese for development of Gwadar," Lijian Zhao, the deputy chief of mission at the Chinese embassy in Islamabad, tweeted last month.

Naval Facility

For its investment in Gwadar, China will receive 91 percent of revenues until the port is returned to Pakistan in four decades' time. The operator, China Overseas Ports Holding Company, will also be exempt from major taxes for more than 20 years.

Pakistan's maritime affairs minister, Hasil Bizenjo, said the arrival of the Chinese in the region contrasted with the experience of the past two centuries, when Russia and Britain, and later the United States and the Soviet Union, vied for control of the warm water ports of the Persian Gulf.

"The Chinese have come very smoothly, they have reached the warm waters," Bizenjo told Reuters. "What they are investing is less than a peanut for access to warm waters."

When a U.S. Pentagon report in June suggested Gwadar could become a military base for China, a concern that India has also expressed, Beijing dismissed the idea.

"Talk that China is building a military base in Pakistan is pure guesswork," said a Chinese Defence Ministry spokesman, Wu Qian.

Bizenjo and other Pakistani officials say Beijing has not asked to use Gwadar for naval purposes.

"This port, they will use it mostly for their commercial interests, but it depends on the next 20 years where the world goes," Bizenjo said. S(This story has been refiled to correct typos in spellings of names of Chinese officials in paragraphs 40, 46)