

Mountain tensions

India strengthens air bases near China

While India and China publicly support a diplomatic solution to resolving the border tensions between them, progress is slow and dissent is inevitable. **Brian Cloughley** assesses India's increasing aerial capability in the area and the effect this will have on its northern neighbour.

KEY POINTS

- India is upgrading its air bases in areas disputed with China, *Jane's* can confirm after analysing commercially available satellite imagery.
- The developments could have a variety of applications, but in Indian-administered Kashmir their utility is entirely military.
- The improvements to the air bases demonstrate that, despite a political rapprochement since the turn of the century, Sino-Indian relations will remain tense.

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Since the brief conflict in 1962 between China and India, in which China's People's Liberation Army overcame its then poorly equipped and ill-prepared adversary, bilateral relations have swung from open antagonism to ostensible moderation.

Primary among concerns between the two nuclear neighbours has been their shared 4,500 km border. Some 3,268 km of the border are disputed, as China unilaterally withdrew to boundaries of its own choosing following the war.

The intractable nature of the dispute was highlighted by the most recent 'special representatives' talks on the boundary in Beijing on 18 and 19 September 2008. The discussions, which were the 12th in the series, ended inconclusively and no date was set for the next round.

The border dispute exists in both the east and the west. To the east, disagreement centres on Arunachal Pradesh, a northeastern region designated in 1987 by India as a state of the union, but subject to ongoing claims by China.

Further west there is similar disagreement

over the Aksai Chin desert plateau, abutting two of China's five autonomous regions, Xinjiang and Tibet, at an altitude of some 4,500 m, with peaks of over 6,700 m. The region has an area of 42,685 km² (the size of Kentucky or Denmark) and has been occupied by China since the 1950s, but India asserts that it is part of the territory of Indian-administered Kashmir.

India says that approximately two thirds of the former princely state of Kashmir, including Aksai Chin, is within its territory, but both China and Pakistan challenge this claim.

These long-running disputes have largely remained dormant irritants in Sino-Indian relations. However, recently acquired commercially available satellite imagery demonstrates that India is increasing its military presence along the disputed borders in both the east and west.

In particular, India has engaged in activating and developing military airfields and constructing roads near Aksai Chin and in Arunachal Pradesh close to the Line of Actual Control (LAC) that is currently the de facto boundary between the areas administered by India and China. These developments have occurred in tandem with Indian claims of increasing Chinese incursions over the LAC. Despite the ongoing peace process, therefore, continued militarisation of the border areas demonstrates that little progress should be expected on formal agreements and delineation, and border disputes will continue to highlight mistrust between the two major Asian powers and nuclear-armed neighbours.

Border crossing

The continued militarisation of disputed areas is sporadically made evident by claims of cross-border incursions. India claimed some 140 border violations were committed by Chinese troops in 2007, and 65 in Sikkim alone from January to June 2008.

In April, New Delhi claimed Chinese troops were detected near Maja, approximately 12 km inside Arunachal Pradesh, and in mid-2008 China queried Indian control of a small, 2.1 km² tract of land known as the Finger Area, jutting into Chinese territory in the north of Sikkim.

In the west, on 16 May there was confrontation between Chinese and Indian forces in the Demchok area of the Ladakh region. On 2 September, Indian forces claimed Chinese troops crossed the LAC on and along the Pangong Tso, a lake at a height of 4,250 m which has approximately half its length on either side of the LAC.

While no figures are available from the Chinese side, it is apparent that Beijing does not consider movement of its troops to be illegal in those areas of the region it claims as its own territory, and there will continue to be dissent over such incidents.

Patrolling the line

Such incursions are the most obvious demonstration of the continued military patrols and presences along the LAC in both the east and the west. However, less publicly known is the priority given by both countries to improving military installations along their boundary.

In January 2008, immediately before Indian Prime Minister Manmohan Singh's first visit to Arunachal Pradesh, Beijing lodged a complaint concerning India's construction of military defences in Sikkim. China's highlighting of the issue may have arisen from its concerns that India's development of military defences in disputed areas is currently progressing at a scale and pace that appear inconsistent with independent assessments of credible threat levels.

Reports in 2008 indicated that the Indian Air Force (IAF) and army are developing bases in the Ladakh area, including Daulat Beg Oldi at 5,060 m, and Fuk Che at 4,175 m;

respectively eight and 15 km from the boundary with Chinese-administered Aksai Chin. There is also involvement in construction by the Indo-Tibetan Police Force, a paramilitary organisation whose soldiers are well-acclimatised to the altitude of the area. In mid-2008, work began to reopen an old advanced landing ground at Nyama, also close to Aksai Chin. A significant IAF/army base with a 2,755 m asphalt runway at an altitude of 3,256 m has already been operational since November 2001 in the region's major town, Leh, 150 km from Daulat Beg Oldi and 200 km from Fuk Che. The runway can take Il-76 transports and advanced combat aircraft, including MiG-29s and Su-30s.

Air Marshal Pranab Kumar Barbor, commander of Western Air Command, is responsible for air operations in the region. He said on 4 October that the bases being developed "will enable India to improve its communication and improve supplies to troops" manning positions and patrolling along the LAC.

Such air-landed materiel would augment resupply by land, which is difficult because of the remoteness of the region, while parachuting equipment and rations is expensive and prone to a high loss-rate. However, this is unlikely to affect India's ongoing deployment to the Siachen Glacier, which is the site of irregular clashes and an ongoing confrontation with Pakistan. Indian army units engaged in the Siachen Glacier are resupplied largely by road and from the Thoise airbase, 60 km north-northwest of Leh.

Base development

The improvements to the air bases in northern Indian-administered Kashmir are therefore targeted towards Aksai Chin and China.

The first signs that the two air bases near the LAC were operational came on 31 May 2008, when an An-32 landed at Daulat Beg Oldi. This was the first aircraft to do so since 1966, when an earthquake forced closure of the base. The An-32 could not close down on landing, as engine restart at that altitude is not possible, and only 35 passengers and a tiny amount of freight were transported during the summer. At such an altitude, the An-32 can deliver a maximum load of four tonnes and take off with 1.5 tonnes.

The base itself has a 1,945 m natural hardened strip; with a less-developed emergency strip of 1,333 m extending from its southwest end. The facility has three marked helipads and rudimentary military accommodation. Temporal analysis of satellite imagery over the base

shows that construction and improvements have taken place since May 2008, reflecting India's desire to bolster its facilities along the LAC.

Further evidence of this trend was provided by the first landing at Fuk Che on 4 November. This base has a single natural hardened airstrip, stretching approximately 2,750 m, with painted markings and mobile and permanent navigation aids. The complex is well-developed, with barracks, munitions storage and bunkers/sites for surface-to-air missiles (SAM) and anti-aircraft artillery (AAA) defences.

The landing at Fuk Che was made by another An-32 – from 48 Squadron in Chandigarh. The base's position suggests it would be used for resupply in the southern sector of Indian-administered Kashmir when para-drop and road access are impractical.

The two landings reflect India's strategy of developing its air strips near the LAC in case of conflict with China in the region. This is supported by the forthcoming opening of Nyama

and Nyama and improvements to their facilities therefore represent New Delhi's attempts to prepare for a forward supply strategy if conflict occurs. With more developed air strips and support facilities, India would potentially be able to sustain its operations in the forbidding Himalayan region indefinitely, as long as troops, materiel and money were available.

Mystery of Chu Shul

A further facility exists along the LAC and has recently undergone extensive development. However, despite possessing a basic air strip of approximately 1,665 m in length flanked by AAA and SAM sites, Chu Shul has as yet undetermined and possibly very different purpose.

It was stated officially in November, and widely reported in the Indian media, that plans to develop the base had been shelved, but commercially available satellite imagery obtained by *Jane's* shows there is considerable activity in the area. The imagery also shows that between

April 2005 and December 2008, India has constructed a 87 m by 80 m paved pad, on which more than a dozen peculiar symbols have been painted. Some of the graphic symbols – including a fleur-de-lis, a fern leaf, a snowflake and curved swords as well as geometric, semaphore-like shapes – are emblematic of military insignia. However, the indeterminate nature of some of the symbols, the construction

since 2005 and the presence of an electricity sub-station power grid connected only to the pad, which can potentially transfer power that far exceeds the amount that normal or civilian operations of this size would require, suggest this facility is of a strategic nature.

In addition, a single paved road leads directly from this site four miles east, across the LAC, to Spanggur Tso lake in Chinese-administered Aksai Chin. The road, which is flanked by revetted fighting positions and checkpoints, leads through the substation to a single gated access to the site. Such perimeter security supports the assertion that this is a strategic site of a sensitive nature.

Other features include one large and one small helicopter pad, a regulation-size basketball court, a stationary piece of equipment that may be a transmitter or antenna and a series of revetted, partitioned bunkers that highly resemble conventional munitions storage.

The purpose of this site is impossible to determine without further intelligence, but various uses have been suggested to *Jane's* by regional, military and imagery experts. These are

'Where population is sparse the purpose of developing the airfields is entirely military and a significant advance in Indian capabilities in the region'

advanced landing ground, which sits 60 km northwest from Fuk Che. Air Marshal Barbor said on 13 November that India is "working on the Nyama advanced landing ground and hopefully it will be open for fixed wing aircraft operations soon. Work has already commenced there."

None of these bases suggests a significant, permanent presence along the LAC, as stationing aircraft at such an altitude would prove impossible and living and working (and fighting) at the heights of these forward bases can be challenging even for acclimatised troops. The aircrew of the An-32 that landed at Daulat Beg Oldi, for example, found it necessary to wear oxygen masks during their ground time.

Moreover, the positions are not currently equipped for significant combat. Nyama is at best a rudimentary facility, while Daulat Beg Oldi and Fuk Che, despite being potentially well-defended by AAA and SAM and protected by normal defensive posts, would prove difficult to hold if they came under major assaults from the Chinese.

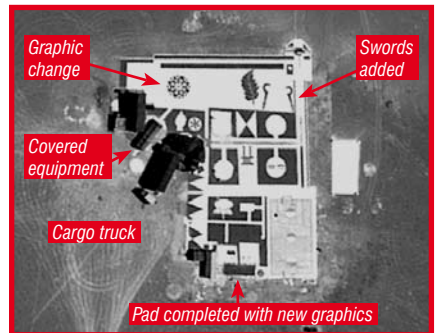
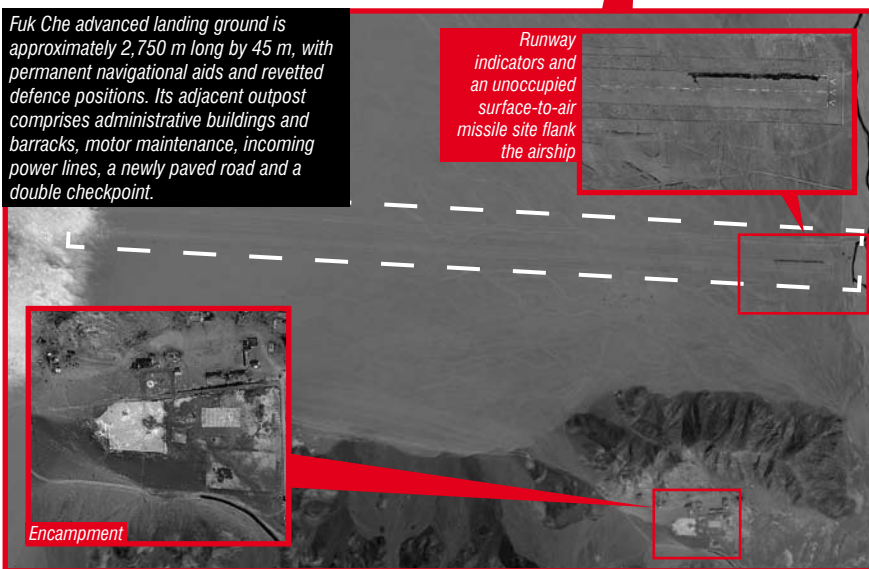
The opening of Daulat Beg Oldi, Fuk Che



Between April 2005 and December 2008, significant activity has occurred at Chu Shul. The site's purpose is currently unknown, but the perimeter security and power supply suggest the site is of a strategic nature.



Between July 2008 and October 2008, a fleur-de-lis was replaced with a 9 m circular graphic and two curved swords appeared. Camouflage was also removed from ruggedised tents and equipment, and new buildings were built.



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generally for strategic weapons assembly, conventional weapons testing or reconnaissance.

Perhaps the most controversial of these theories is that the site could be used for strategic weapons assembly. A location so close to the LAC would allow India's longest-range, nuclear-capable missile – the Agni 3 intermediate-range ballistic missile with a range of 3,500 km – to reach practically every part of China. The location in the nexus between Pakistan and China would also allow India to target either of its primary rivals.

Such a theory is supported by vehicle tracks that are apparent leading from the site to the revetted-partitioned area that resembles munitions storage, while the power supply could be explained by the need for refrigeration and control operations. However, such a theory fails to explain the intricate graphics painted on the site and there are no other forms of intelligence to verify this thesis.

Alternatively, the site could be used for testing aerial or space-based weapons, with the patterns on the ground acting as a visual calibration or aerial honing signal.

In terms of reconnaissance, the site could act as a simple method of calibrating India's imagery satellite, which would explain the graphic symbols, but not the power supply.

The site could also be an intelligence collection base, which would explain the power supply (needed for the antenna and intelligence analysis systems) but not the graphic symbols.

Finally, the site could simply be a memorial to the Battle of Chu Shul in November 1962, a highly symbolic conflict in which 114 Indians held off vastly superior Chinese numbers. However, this would fail to explain the exact imagery used – the Kumaon regiment that fought the battle has a lion holding a cross as its insignia – and the facts that the imagery changes and the site was constructed only in 2005.

Each of these explanations has its strengths and there may be more that have not been not considered. However, none are conclusively correct. While the site at Chu Shul is therefore clearly strategic, its use is yet to be proven.

The east is red

Concurrent with the development of the sites in the western LAC area, India is also pressing ahead with greater investment and deploying more sophisticated military materiel in the eastern LAC area.

In Arunachal Pradesh, the central government has approved construction of India's largest hydro-electric power station (3,000

MW) at Dibang; a new government secretariat building in the capital Itangar; a railway line between Itangar and Harmuti in Assam; and improvement of civil airfields at Pasighat (also an IAF facility), Daporijo, Ziro, Along and Tezu. There is also development taking place of the old IAF advanced landing grounds at Mechuka and Tuting, and in October Pranab Mukherjee, external affairs minister, announced in parliament that there would be 13 "operational roads" built in Arunachal Pradesh as well as construction of "airports close to the border".

India has also decided to station Su-30 multi-role strike fighter squadrons in Assam, concurrent with upgrading airfields there and in Arunachal Pradesh. The major IAF base at Tezpur in Assam was closed in September for several months following disbandment of its MiG-21 multi-role strike fighter operational

'Continued militarisation underlines the ongoing mistrust between China and India'

conversion unit. When it reopens in 2009, an Su-30 squadron will be stationed at the base, comprising between 10 and 12 aircraft. Considerable development is also underway, especially in improving radar and air defences. Tezpur is one of four major military airfields in Assam, and the others (Jorhat, Gauhati and Chhabua) are also being upgraded, with another Su-30 squadron likely to be based at Chhabua in the future. The Su-30 is more manoeuvrable, faster, better equipped and has twice the range of the MiG-21, greatly extending India's air assets in the northeast near the LAC.

Military use

India's programme of establishment, development and modernisation of military facilities and roads along its frontier with China is understandable from the point of view of furthering economic development in Arunachal Pradesh, and the northeast in general, concurrent with a desire for security. Introducing the Su-30 in place of the obsolete and phased out MiG-21 asset can be regarded as normal progression in overall defence preparation.

However, in the west where population is sparse – and almost non-existent along the LAC – the purpose of developing the airfields is entirely military and a significant advance in Indian capabilities in the region, in riposte

to the Chinese presence in Aksai Chin.

For the moment, it appears that the countries are unlikely to flex their military muscles to the extent of seeking conflict in either eastern or western disputed areas, but there is the distinct possibility of a minor incident escalating into a more solid confrontation. Aggressive patrolling by both sides could easily cause a local altercation that could lead to deployment of larger bodies of troops. In such a situation, the Chinese would have the advantage, given the terrain and existing support infrastructure in Aksai Chin. The difficulty would be in resolving such an incident, as the temptation to maintain positions would be considerable.

India and China will continue their standoff, and doubtless each side will register protests from time to time concerning their adversary's activities. However, the western bases could be regarded by China as a provocation.

Although there is as yet no evidence of Beijing increasing its military deployments in Aksai Chin in response to the Indian developments, the upgrading of facilities will only concern China and encourage it to escalate its own activities. The strategic base at Chu Shul will be of particular concern to Beijing.

While both China and India will therefore continue publicly to support the peace process and negotiations over dispute areas, both governments appear eager to bolster military deployments. Although no conflict is likely in the short to medium term, these two nuclear-armed neighbours will continue to pursue military developments and deployments along their disputed boundaries.

Such continued militarisation underlines the ongoing mistrust between China and India, ensuring that no progress on negotiations is likely for the foreseeable future. ■

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