

## INDONESIA'S ARMY AVIATION

### Indonesia's Army Aviation

Who is observing Indonesian air power must consequently have a look at Indonesia's army aviation service or Pusat Penerbad as part of the armed forces of the republic of Indonesia or Angkatan Bersejata Republik Indonesia (ABRI). The force consist of helicopters and fixed wing aircraft and is tasked with assault, attack and transport duties and the main locations are Jakarta on West Java and Semarang located in Central Java while several locations in the country can be used as temporary locations or co-locations with other military units or civilian area.

The Pusat Penerbad is consequently an instrument for the regular army and is handling in support for these units. The army was under the Suharto doctrine characterized for years as a force with dual function, acting both as defenders of the nation and as a social-political force in national development as guards of the nation, a doctrine described as 'dwifungsi'. However today, the army sees itself as an important instrument to prevent the established democracy from radical elements and tries to express an image as truly friends to the nation for the benefit of the people. In this prospect, the Pusat Penerbad proofed itself when they played an important role in the humanitarian relief operations during the immense crisis of the tsunami disaster when this struck northern Sumatra on December 26, 2004. The Pusat Penerbad paid in this way a depth to Aceh people while they funded the first steps of the organisation. The army is organized in 10 regional commands or KODAM's ( Komando Daerah Militer) in specific districts throughout the country. Special Forces are formed by a special forces command or KOPASSUS (Komando Pasukan Khusus) and have close cooperation with the Pusat Penerbad.

### Short history

Although the Commander-in –Chief of the Pusat Penerbad; Brigade General Arafin Seman claims the army aviation was born in 1949 when the first Douglas C-47 was donated from the rich Aceh community in fact not much is known about this period. First official notes however are from 1959 when the force was called Dinas Penerbangan Angkatan Darat or Dinas Penerbad (Disnerbad). In the first years mainly VIP- or troop transport missions were conducted by a few C-47's and a De Havilland DHC-2 Beaver. In 1963 the force received two Cessna L-19B Bird Dogs from the U.S. under MDAP and some 15 Mil Mi-4 Hound helicopters were bought, capable of carrying 14 soldiers and equipped with a DShK-38 calibre 12,7 mm gun. The Mi-4 became a workhorse to bring troops in the field while other aircraft purchased during this period such as some Cessna 310P's and a few Aerocommander 680 FL Grandcommanders served in observation or liaison functions. Two Mi-4's were tasked for supposed anti-communist infiltration from Serawak especially during 1966-1968 and based permanently on Kalimantan at Serawak border area.

They could hardly accomplish the task of border patrol and three Alouette III (from an acquisition of totally seven plus an extra example later in 1975) were attached in 1970 to bring some relief. Finally, the Mi-4 was grounded in 1972 due to lack of spare parts. Fixed wing aircraft were mainly based at Kemayoran in Jakarta at that time and the helicopters at Kalibanteng, Semarang, in 1965 renamed Achmed Yani as a tribute to one of the murdered

generals during the 1965 coup. During 1976 a first batch of nine IPTN licence built Bolkow NBO-105 helicopters and in 1977 a sole Britten Norman BN-2 Islander came to strengthen the force. In 1978 totally 18 Bell 205A1 were second handed obtained from the US civil market and by IPTN converted for military use to UH-1 configuration including armoured seats for the crew and a 7.62 FN Herstal MAC-58 gun in the door. Today still eight of these helicopters are in active service.

## Change of structure

During recent periods, the organisation comprised two squadrons with helicopters Skadron-1 and 3/Heli-Serbu and an aviation school or Pusat Pendidikan Penerbad at Achmad Yani, Semarang and one tactical support squadron or Skadron-2/Bantuan at Pondok Cabe, Jakarta. The problem was recognized that effectiveness could reach a higher level because pilots were on multi-call in all branches of the army. Pilots must be an officer in rank and are in that position valuable for other branches such as cavalry, infantry, artillery, engineering etc. and so they could walk in Army Aviation when needed. The high command asked Brigade General Arafin Seman to reform the Army Aviation and build a new organisation resulting in an independent corps, which was established in 2006 with the name Corps Penerbangan Angkatan Darat (CPN). Today the squadrons are renumbered in Squadron 11 Heli Serbu or light assault squadron, Squadron 31 Heli Serbu or heavy assault squadron and Squadron 21 Sena as support squadron.

## Helicopter tasking

Noted Bell 205A-1 are attached to Squadron 11 Heli Serbu or 'Eagle' Squadron at Achmad Yani. They serve together with eight IPTN built NBell 412's (four examples delivered in late eighties and three NBell-412HP high performance models in late nineties plus one example in 2005) and NBO-105's under the device 'Amur Amara Jaya' or 'great victory in aviation attack'. Today the Pusat Penerbad counts 15 NBO-105CB's of which the most are in use as observation models and some (about four) are in a gunship configuration. In fact there are two versions of the gunship with the possibility of carrying two standard Nato Twin Machine Gun Pods (TMP's) or the rocket gunship with two 12,7mm calibre FN Herstal M.3P Multi Launch Rocket Systems (MLRS) with 13 FFAR rockets each. The rocket types varies from anti- personnel (FZ-21) to anti-tank (FZ-58). The unit provides air mobility in general terms. This includes fire support (not close to friendly troops), close air support (close to friendly troops), air assault , air observation, air transportation such as logistics, medevac supply-missions, personal transport and Command & Control.

Both Bell 205A-1 and NBell 412 can bring in eight fully equipped heli airborne troops in the field during air assault operations and are very suitable helicopters for this purposes especially the ones who are equipped with the 7.62 guns. Before landing these guns will give fire support if necessary and the helicopter can be exposed to a higher thread level thanks to its self-protection ability. The Huey is capable for sling-operations to move cargo such as light armour and hoist operations either for recovery operations or fast roping for Kopassus troops in special operations. The NBO-105 in its best performance being a typical Low Observation Helicopter (LOW) directs the troops on the ground being the eyes in the sky for them. In this way the control of the artillery can be assisted while the result of shooting will be known immediately when the helicopter observes for battlefield assessment. When necessary three persons can sit in the back of the NBO-105 and medevac operations are possible. In standard operations, a typical crew of two pilots and two engineers will operate in

all helicopters except the Mi-35.

### **Mi-35P, controversy but capable**

When two Mil Mi-35P Hind-F were bought in one deal with two Sukhoi Su-27SK and two Su-30MK in 2003 some people said; "why putting such an effort in expensive and complex weapon systems like the Mi-35P or the Sukhoi Flankers while so many needs are in other fields of the society?". President Yudhoyono has to deal with this since democracy is asking for opinions but the fact is when you compare the input in military systems with neighbouring countries Indonesia is quite modest. In modern air warfare, a bigger helicopter with attack possibility is not too much asking. Considering the fact that Indonesia is a huge country with many islands Indonesia will need much more than only two Mi-35P's and that is just what they intend to do. Despite other thoughts in society, President Yudhoyono announced during 2007 MAKS at Zhukovski in Moscow together with president Putin that Indonesia would acquire a second batch of 5 Mi-35P together with 10 Mi-17 from Rosoboronexport. As part of the commitment on the bilateral agreement, Russia will provide one billion USD in loan for Indonesian procurement for the period of 2007-2010. In fact these helicopters would have come earlier when funds could have been generated. The Mi-35P is the first helicopter in the Pusat Penerbangan special designed and dedicated to the attack role and when the first arrived (HS-7130) on September 15, 2003 on Halim Perdanakusumah Air Base in Jakarta in an Antonov An-124 Ruslan, the Kepala Staff Angkatan Darat (KSAD) or highest army commanders were very proud. They urged test pilot Sergey Fedorov after final assembling in Hangar Skatek TNI-AU to give a flypast demonstration together with an Air Force Colibri helicopter on October 5, 2003 marking the beginning of a new era.

At that time the Hinds were painted in dark shade green with a bright yellow band around the tail and markings of TNI-AD (Tentara Nasional Indonesia- Angkatan Darat) the Indonesian word for Army on the fuselage. The name TNI-AD was adopted in 1974 but the flying corps is still referred to as Penerbad. Repainting of the helicopters resulted in a much darker colour and low visibility markings only which harmonizes with the other helicopters and airplanes in the force. The Hind-F is of the latest technology and very capable in attack with its 30 mm Gsh-30 fixed gun mount but can also carry unguided rocketpods with 240 mm S-24 rockets or 80 mm S-8 rockets or guided missiles of 9M114 ATAKA type launched from the Shturm-V high precision guided weapon complex. Both pilot and gunner are protected by side armor plates and front armoured glass and have sophisticated self- defence systems like optronic countermeasures equipment and infrared suppression exhaust mixer boxes over exhaust engine dusts, ASO-2V flare dispensers and provisions to pop chaff.

The infra-red jamming system is also manipulating and the pilot has a display alarming him when an object is approaching the helicopter with a 360 degrees surround capacity. A special radiation warning station gives a sign when nuclear radiation is spotted. In assault operation the Hind can transport eight fully packed soldiers to the landing site. Eventually the Pusat penerbad wants to acquire totally 6 more Mi-35P and 18 Mi-17 and they are serious in these attempts because even when there are today just the two Mi-35P's of the first batch, the housing for a complete new squadron is ready with a big brand new hangar. It seems a question of time and budget to realize this. The Hinds are serving with Squadron 31 Heli Serbu or Tiger squadron and have proudly adopted the legendary freedom fighter Pangeran Diponegoro as a patron. Aviation soldiers or 'Wira Amur' of Squadron 31 have the device 'Yudha Cakti' or grateful battle. For the Mi-17's will be a new squadron formed as is expected but this may also be a mixed squadron with the Hinds. The new squadron will strongly

cooperate especially with the Kopassus force.

### **Professionalism is the key word**

To maintain capability there is an own army aviation flying school in Semarang named Pusat Pendidikan Penerbad or Pusdik Penerbad. A typical course is 120 hrs at the Schweizer H-300 for basics and 60 hrs on the NBell-412 / NBO-105 or Mi-35/17 in advanced stage for type rating. When you want to fly another helicopter type you need 3 months conversion course. Most pilots have two type ratings. The Schweizer H-300's are only flying in the Pusdik Penerbad and the other types are on squadron level. The training involves also 20 hours preliminary period on the FRASCA NBO-105 and NB-412 simulators at Achmad Yani before taking the seat of co-pilot. At this moment experienced pilots take their chance to learn the Mi-35P and become the possibly instructors for the future. Some pilots were partly trained with the Indonesian Air Force helicopter school in Suryadharma and others received a course in the U.S. Army. The tactics are much influenced by the U.S. especially when operations with special forces are running. When I inform with Captain Sundoro Agung about his most remarkable experience, he mentioned his personal experience in Aceh when many countries came to help in the disaster relief operations and joining together with the same profession, making contact, feeling the brotherhood with the other pilots and feel that what you doing is a good job. He met pilots from the US, Philippines, Japan, Switzerland, Sweden, Holland, UN, Malaysia, Australia and Singapore. Operations urged him sometimes to use the hoist up until 100 metres to take a person from a spot where he could not land and in this way he saved several persons.

The total effort of the Pusat Penerbangan in Aceh was organised in the Detasemen TMMD Penerbad with 2x Mi-35P (HS 7129 and HS 7130), 4x Bell 205A-1 (HA 5073, HA 5077, HA 5124 and HA 5126), 2x NBell 412 (HA 5116, HA 5128) and 2 x Casa 212 (A-9118 and A-9035). At the moment of the visit an exercise was running called Geladi Posko 1 and Geladi Lapanean which inflicted a commando post exercise and field exercise. In the Army, there is an obligation to exercise regularly in personal exercises, small unit exercise but also big unit exercises and joint exercises. The shooting exercises are on a special range in Ambal in Central Java. The maintenance of the helicopters is on the base, under supervision of AVIM (Aviation Intermediate Maintenance) or high level maintenance at PT Dirgantara (Formerly IPTN) in Bandung.

### **Fixed wing component**

The fixed wing component of the Pusat Penerbad is based at Pondok Cabe in Jakarta sharing the airfield with the Police Aviation and the Air Force Aeroclub FASI. The Squadron 21/sena is a support squadron, as is the airbase while HQ is located at Semarang. The device Negara Kesatuan Republik Indonesia (NKRI) Harga Mata meaning fixed price with no negotiation resembling the resoluteness of the soldiers is projected inside the main building near the entrance. The core unit exists of five C-212 Aviocars (seven delivered) which are in use for general purposes, troop transport, communication flights, air intelligence, aerial photography and Command & Control. When needed the Aviocars can drop parachutists, as can also do the Bell or Mi-35 helicopters. For Search And Rescue missions, sometimes executed above the sea the Casa can drop the Low Altitude Parachuting Extracting System (LAPES) which can released by handle from the cockpit from a rail. The LAPES contains first Aid equipment and a dinghy. Two ex Emirates DHC-5 Buffalo's are serving in the VIP role and inside with comfortable seats in a green tune. They were originally purchased by IPTN

who bought them cheap in exchange for new CN-235 aircraft for the Emirates. IPTN offered them first to the Air Force and secondly to the Indonesian Army and Naval aviation.

Pilots will need a trajectory with the Air Force to learn flying on fixed wing aircraft first 120 hours on the AS-202 Bravo and then 60 hours on the Beech T-34C Turbo Mentor before the move to the Aviocar and becoming a co-pilot. Aircraft and helicopters of the units are frequently changing between the two bases or deployed elsewhere. The Pusat Penerbad is comparatively well equipped and has a strong leadership. It will be interesting to observe the progress in development in future.

Kees Otten & Wim Das