

INDONESIAN NAVY – JUANDA SURABAYA

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On Patrol Mission from Surabaya

One morning in October 2007, two aircraft receive a refuel at Juanda Naval Air Station in Surabaya. Checking the aircraft, the ground crew prepares for what is coming next and this will be a mission over Surabaya's marine surroundings. Juanda, being the main location of Indonesian naval aviation or Dinas Penerbangan Tentara Nasional Indonesia Angkatan Laut (TNI-AL) also known as DISNERBAL is a large combined civil and military airfield with a mixture of aircraft based on the military side. Although basically tasked for maritime and transport missions, some aircraft have utility and training functions. Visiting transport aircraft of the air force (TNI-AU or Angkatan Udara) are also regularly seen at Juanda.

Nurtanio's aircraft

While waiting completion of the preparations for the two patrol aircraft, our team takes the opportunity for a quick survey of Juanda's surrounding from the air by an NBell 412. The NBell 412's of TNI-AL were not purchased from Bell Textron but licence-manufactured with IPTN or Industri Pesawat Terbang Nurtanio. IPTN produced aircraft are designated with an N in front resembling Nurtanio. However, in 2000 IPTN adopted the new name Pesawat Terbang-Dirgantara Indonesia (PT-Dirgantara) or Indonesian Aerospace (IAe) which officially was inaugurated by President Abdurrahman Wahid in Bandung where the factory is located at Sastranegara airfield. Many aircraft in Indonesian civilian companies or armed forces came from Nurtanio's factory and so we will find them in the Navy's inventory.

The NBell 412 serves in the SAR, liaison and tactical air support and surveillance role. Juanda's military side or officially called Lanudal Juanda is situated nearby the big harbour of Surabaya. In the surrounding area, there is heavy trafficking of ships as we can see from the chopper and many ships are in the waiting area for their chance to disembark the load. The NBell 412 keeps an eye in the sky above the coastal area. Some four of these helicopters are in service and adopted recently a new overall grey colour scheme.

Surveillance twin

In the meanwhile, the fixed wing aircraft are waiting when the Bell put us down. The aircraft of today's mission are from TNI-AL from Skwadron Udara 800 (800 squadron) and tasked with maritime surveillance and patrol while operating within Satuan Udara Armada Timur (Satudarmatim) or Eastern Fleet Air Wing. Off we go! One Australian built GAF N24 Nomad missionmaster and one IAe built CASA NC-212MPA Patmar (Patroli maritim) are airborne for a medium range patrol flight. Those flights are conducted regularly to monitor ship movements and a necessity because of the busy activities on the water. Several offends can be detected from out of the sky, and to watch the scene closely airplanes sometimes operates from low levels like a 100 feet. The six-members crew of the CASA consists of two pilots, one engineer, one radar operator and two observers. The Nomad lacks a special radar operator but brings also two observers in alert position. Several ships are spotted and checked. The aircraft making sharp rounds and are toying with everything

moving on the sea surface. Normal and probably obscured actions are monitored and evidence will be stated by photographic results. For this purpose, the observers use Nikon digital camera's with zoom lens. In the rear of both aircraft are observation windows with blister shape enabling the photographers to enlarge their spotting view. The CASA NC-212MPA is equipped with the Thales AMASCOS (Airborne Maritime Situatuin Control System) including an Ocean Master Surveillance radar providing a search range of 180 km. and connected to a Chlio FLIR unit with a reach of 15 km. While flying in the dark little ships and even exposed periscopes of submarines can be detect, although encounters with submarines are very rare.

The Nomad uses optical observation only but according Indonesian naval pilots the Nomad is more flexible in low speeds and designed for low-level operations enabling the observers a blink from short distances. Despite Australian reports of shortcomings in the flying performances of the Nomad, Indonesia claims the aircraft are fully suitable for the task they need them for. Before the introduction of the CASA NC-212MPA during 2007, the TNI-AL used the special equipment on the Nomad N22S Searchmaster, but tasks have been relieved and given to new CASA Patmars. (The now used short version Nomad's are called N-22B Missionmaster, the longer versions are called type N-24) Two are operating from Juanda and one in Tanjung Pinang near Singapore putting the Searchmasters out of service. The Patmar can stay in non-stop patrol flight for five hours. There have also been negotiations with IAe to convert a further three standard NC-212-200 aircraft from the naval inventory into the Patmar configuration.

Shallow water actions

Why putting such an effort in controlling the seas? This question can be easy answered looking at the geographic of Indonesia were we find 17.000 islands and 55.000 km. of coastline in gigantic sea areas including million square kilometres of economical exclusive zone. At least there must be some threat against illegal actions. This includes criminal acts against the environment like deliberately evacuating oil in the water and smuggling either narcotics or economical goods with western Sumatra being the smugglers favourite. To imagine the enormous task of the TNI-AL in this matters one must realize that a three quarters of Indonesian sea territory is shallow water providing an ideal operation area for this forms of illegal acts. Besides this, South East Asia is suffering from typical domestic problems on the sea. Illegal fishery and fish theft are common, especially from the Sabang Sea, Riau Islands and West Kalimantan coast. Smuggling of timber, sand and bauxite are also numerous but most of all the number one problem is piracy.

Guarding the Inonesian seas

Piracy is a major concern in especially the Western part of Indonesia with the Malacca Straits being the most dangerous sea route in the World. One third of all piracy acts in the world are noted from Indonesia stated by the International Maritim Bureau (IMB). The Satuan Udara Armada Barat (Satudarmabar) or Western Fleet Air Wing in the Singapore region consequently must cooperate closely with the more equipped Eastern Fleet Air Wing at Surabaya to deploy skilled personnel and flying equipment at positions were they are most needed. To cover the Malacca Straits effectively Indonesia operates not only one CASA NC212 Patmar from Tanjung Pinang but cooperates in a joint structure with Malaysia and Singapore since 1,5 year in operation 'eyes in the sky'. Twice a week, on different day's, surveillance flights are conduct on rotation by the TNI-AL CASA, a Malaysian Air Force

Hercules or a Singapore Air Force Fokker 50MPA. To chase the pirates with their wooden boats by radar before they return in the ambush is very difficult and the availability of thermal imaging equipment brings the search operations in a more advance stage. However, pirates are nowadays also good equipped with cell phones, GPS, transmitters and machineguns. Patrol aircraft are unarmed, so after discovery they must give the enforcement part in hands of the navy who will sent a fast patrol boat (FPB). The navy has three types of FPB's in the inventory armed with gun (FPB-G), missile (FPB-M) or torpedo (FPB-T) but most likely, in most cases the gun equipped boat will chase the bandits. In the Singapore region, Indonesia cooperate FPB-patrols with Singapore (Indosin). The Western Fleet Naval Air Arm is also responsible for recording suspicious warships in this area, and to keep an eye on the Kayuara shooting facilities which Singapore rents from Indonesia.

Close harmony with the air force

Off course, operations will be in cooperation with air force units (TNI-AU or Angkatan Udara). While TNI-AL has only surveillance aircraft with limited range and purposed for tactical missions, the navy can rely on their air force counterparts, operating strategically. From 5 Skuadron at Hasanuddin Air Base on Makassar Sulawesi, central positioned in the archipelago, three boeing 737-2X9 Surveiller aircraft equipped with SLAMMR have the obligation to monitor whole Indonesia. According wing commander Colonel Gatot Purwanto, this can be done in one day. The two Motorola AN/APS-135(V) high resolution Side Looking Airborne Modular Multi-mission Radars (SLAMMR) fitted in two dorsal mounted antennae housings in front of the tail enables the crew (two pilots and 12 system operators) to oversee a 100 nautical miles (185 km) sea surface and airspace on both sides with a resolution going as far as small boats. The SLAMMR Boeing acts not only in cases when range is to limited for smaller aircraft but also when higher speed is required. The aircraft which are nicknamed 'Punuk'(Camel) have a multi role capability and are besides Long Maritime Patrol (LRMP) primarily tasked with Airborne Early Warning (AEW).

The air force has its own medium range maritime surveillance component with NC-212 Aviocars of 4 Skuadron operating from Abdelrahman Saleh at Malang, Java, but this task will come to Hasanuddin in 2008 when the first of AMASCOS equipped CN-235MPA will enter service with 5 Skuadron. Missions with the Surveiller Boeings will be conduct regularly but like the TNI-AL in a random pattern. Every year a combined operation with American observers and joint exercises with Singapore, Malaysia and Australia allows foreigners inside the B737-2X9 in order to keep a good relationship in this matters and harmonizing mutual interests and procedures. Especially around the busy Singapore and Bantam regions while monitoring the sea surface and flying in unusual patterns on medium or low altitude the aircraft can easily reach the border airspace. To avoid encounters with Malaysian or Singaporese interceptors it is necessary that all three countries acknowledge the kind of operations and fully understand the purposes why these happens.

Surabaya's inventory

Back to Surabaya, where the GAF Nomad and CASA NC212 Patmar are approaching for landing, no odd behaviour on the water was spotted in this mission. When leaving our CASA, already painted in the new overall grey colour scheme, the base commander Colonel Laut (P) Dodi Hermawan permitted us to review the other based aircraft. The current state of organisation is divided in Western and Eastern Fleet Air Wings, however flying equipment is attached tot the Eastern Fleet Air Wing. Aircraft will be supplied to regions wherever needed.

Besides the main port Lanudal Juanda other airfields are in the west Lanudal Sabang (Aceh, Sumatra), Lanudal Tanjung Pinang and Lanudal Matak and in the east Lanudal Manado (Sam Ratulangi)in Sulawesi, Lanudal Kupang at West Timor, Lanudal Aru/Tual in Maluku and Lanudal Biak in Irian Jaya. The Eastern Fleet Air Wing comprises Skuadron Udara 200, 400, 600 & 800. In Skuadron Udara 200 a continuously training program is established to maintain and develop personnel and units readiness. Some EADS Socata TB-9C Tampico (4) and TB-10 Tobago (5) with two F-33A Bonanza's are in use for elementary and basic flying training together with available Nomads. The navy's own flying school is called Sekolah Penerbangan TNI-AL (SENERBANG) and besides flying equipment pilots have the possibility to exercise on the FRASCA fixed-base Simulator on the base. Equally for helicopter training are some Eurocopter EC-120B Colibri's (3) in use with Skuadron Udara 200, however cadets are receiving their course partly at the TNI-AU helicopter flying school at Suryadharma. Some pilots graduate in Australia or took possibilities for follow-on courses with the RAAF/RAN.

The Navy component for ASW, ASuW and SAR is organized within Skuadron Udara 400, a purely helo-squadron were some six NBell 412 and six NBO-105CB are operating in the same role and can be embarked on vessels. Two Mi-2's are active as utility helicopters but the navy plans to acquire more examples of this type. There have been rumours about the acquisition of Mi-17's but according our spokesman there were no such types in TNI-AL service. The unit also conducts tactical air support and limited sea surveillance and for anti ship actions the squadron used Super-Puma's equipped with Exocet rockets for many years. Three new NBO-105S radar equipped versions were ordered by PT-Dirgantara especially for the Over the Horizon Targeting (OTHT) task from vessels.

Fixed Wing component

For tactical airlift, trooper transport, logistics and support missions Skuadron Udara 600 uses the NC-212 Aviocar (12). When asked, airlift can be given to Marines, especially from 1st Marinecorps (Pasukan Keamanan Armada) or PASKAR with 1st, 3rd and 5th battalions based in Surabaya with the possibility of para-dropping. Aviocars are regularly visiting the other naval airports for communication flights. Two formerly UAE Air Force DHC-5D Buffalo's were acquired from the TNI-AU and overhauled by PT-Dirgantara and are in use for VIP transports. As already mentioned, the aircraft of Skuadron Udara 800 are fully dedicated to maritime Surveillance and patrol but have also secondary roles like SAR and Limited airlift. Besides the three NC-212MPA Patmars there are 16 standard Nomads based at Juanda and 8 stationed at Tanjung Pinang. These Nomads are either N22B or the stretched N24 variants. Some of seven ex-Royal Australian Army N-22B Nomads still bared the Australian camouflage colours with spider insigne, but eventually all Nomads and Aviocars will receive the overall grey colour. There has been an announcement of an order for 10 PZL M-28 Skytrucks but this order has been cancelled and instead resources could be used in effort for the NC-212 fleet.

For the future program, it is wise to understand that between proposals or initial agreements for the acquisition of aircraft and the operational introduction it can take some more time in between than usual in Western countries. This has everything to do with finding financial resources. Another factor is political perception in society being an imminent factor in influencing presidential choices and decisions. This can make the acquiring of new aircraft delicate. However, since 2001 the need for totally 16 new aircraft/helicopters had been recognized and turned in orders. For the time being, the TNI-AL has some wishes to optimize

tasks, which some are reasonable such as new specialised ASW helicopters like the latest Super Puma versions but others, such as Orion LRMPA aircraft are too much asking from the budgetary and are unlikely to be answered. In our opinion the TNI-AL is well organised with modern equipment and dedicated personnel and as we witnessed on the patrol flight our navy pilots showed skill and so we felt comfortable to be their guests.

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