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BOHN'S VOYAGE

CEO LEADS AIR SENEGAL
ON AN AMBITIOUS JOURNEY

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VERS UN VOYAGE AMBITIEUX »

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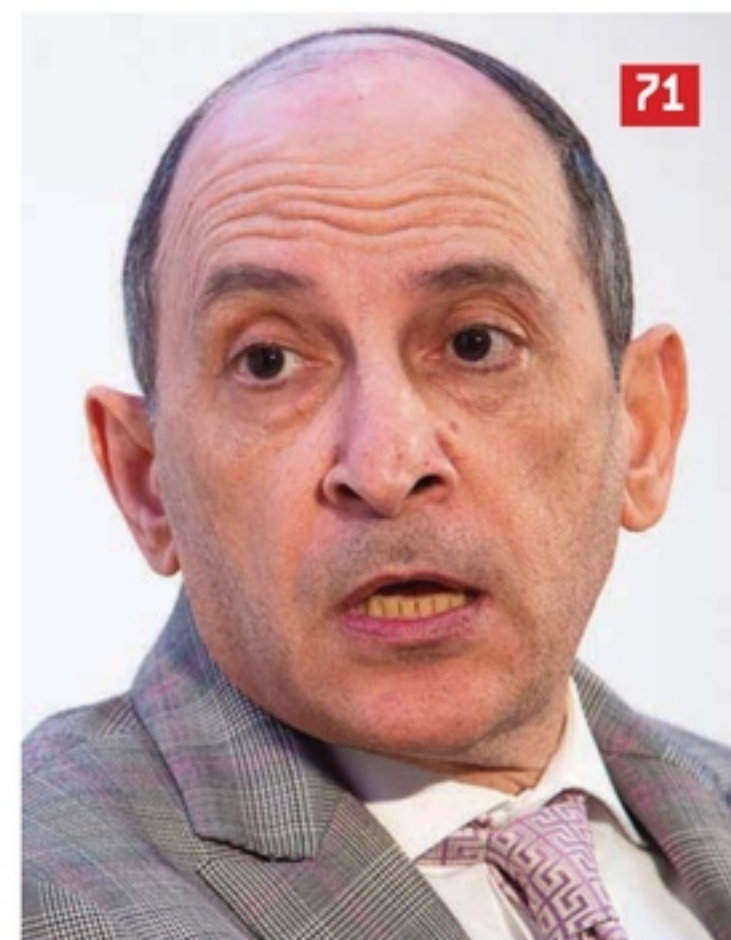
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RAPPORT EN FRANÇAIS



Ghana's air force in a class of its own

*The Ghana Armed Forces have a small but capable air force. The key to its success is training, as **Patrick Dirksen** and **Frank Mink** found out during a recent visit.*

Air Vice Marshal Maxwell Mantserbi-Tei Nagai, the Ghana Air Force (GAF) chief of air staff, is absolutely clear about his force's role.

"Our primary job is supporting the army and the navy. Next to that we assist with governmental issues, like disaster management," he said. "We also help the police and Ghana Gas."

"However, our main role is supporting the army with troop transport, airborne forces, paratropping, fighter ground attack and close air support with the helicopters."

Interestingly, aerial photography, transporting the yield from gold mines, and carrying electoral commission personnel during elections also fall under the force's remit.

The GAF's main air base is at Accra. Two of its recently acquired C295s now fly with the Communication Squadron, having replaced the venerable Fokker F-27s. These aircraft have been put through their paces in Mali, where the Ghanaian forces played a big role in the United Nations mission MINUSMA.

A terrorist attack at Gao in 2016, damaging a C295, put an end to that deployment. The aircraft is now operational again. "We fixed it," said the air vice marshal. "After the bombing, the pilots ran an engines check on the ground and then took

A highly experienced commander

Air Vice Marshal Maxwell Mantserbi-Tei Nagai has been GAF chief of air staff since January 2016.

He graduated at the Military Academy, Whistler Barracks, Accra in April 1980.

He received his wings in 1990 and has accumulated 6,400 flying hours – most on helicopters, including Alouette III, Agusta A109, Bell 412, Mil Mi-17/171 and Harbin Z-9. He also flew the Diamond DA42.

Nagai was formerly commander of the helicopter squadron at Accra AFB, commanding officer of the flying wing at Accra, base commander at Takoradi AFB and later at Accra AFB. He also acted as chief air operations officer during the UN mission UNIKOM in Kuwait and was commander of the Ghana Aviation Unit during two periods of the UN Peacekeeping Operation in La Cote d'Ivoire (UNOCI).



off and checked the systems. When that was OK, we backloaded it to Tamale and then finally to Accra. We got support from Airbus, and we fixed it in situ, here in the hangar."

Although the damage was caused while being operated for the UN, Ghana had to pay the €1.2 million (\$1.38m) repair bill. When asked about future UN involvement, Nagai was clear: "We have been getting requests from the UN to support, mainly with the helicopter operations in Mali, but, right now, we are not in position to do so. Possibly, when we get new acquisitions, like Mi-35s, then we can consider supporting the UN again. But, for now, we have too much work meeting our own internal demands."

Ghana has participated in dozens of UN and Economic Community of West African States (ECOWAS) missions since the 60s, and helicopters also played a big role.

A recent example was in neighbouring Cote d'Ivoire during the genocide, where A109 helicopters were used as gunships and Bell 412s for troop transport. These have, nowadays, been replaced by Z-9 and Mi-17/171 helicopters.

All helicopters are operated by 3 Squadron and are based at Accra AFB. The main roles of the four Z-9s are gas pipeline and powerline patrols, coastal

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One of the two surveillance Diamond DA42s.
Inset: Two of the female DA42 pilots. PICTURE: GAF.



fishery patrols and ambulance flights. "The Z-9 has two stretchers, so it can be used as an ambulance. If the numbers are higher, we go to the Mi-17, which has six stretchers," said Nagai.

Six Mi-17 and Mi-171 'Hip' helicopters also fly with 3 Squadron, replacing the Bell 412 in the troop-lift role.

A few years ago, negotiations were held with Rosoboronexport in Russia about the possible sale of Mi-35s. "At the time, the threat level was assessed and it was felt that a few gunships would be needed. However, funding turned out to be a problem and, when the security situation changed, it was decided to exchange the planned three Mi-35s for some Mi-171s instead," explained Nagai. "But the deal is still in the pipeline."

The Hips are equipped with Nightsun searchlights and a hoist. They can carry sling loads and be armed with an AKS74 gun on a swivel. The cockpit is not digital but it is night vision goggles (NVG)-capable.

There are no plans to upgrade the aircraft. "Suggestions have been made to configure them into some more sophisticated weapons system. But that means we have to ground them, pack them and send them off for maintenance, repair and overhaul (MRO), which would take a lot of time. And we need the aircraft now," explained Nagai.

Also flying from Accra AFB are the K-8s of 4 Squadron that have replaced the L-39 and MB339.

"The home base of the squadron is supposed to be in Tamale but, at the time that they arrived, it was not positioned to receive them. Maybe they will move there now; we are thinking about it if the leadership academy is pulled through," said Nagai.

"The role of the aircraft is strike and fast reconnaissance, mostly on border patrols. They can be armed for fighter-ground attack. For their training, we have a live firing range at Bundase, close to Accra. Since we coordinate with the army during combat, we do air power combat fire training together."

K-8 pilots are selected from the fixed-wing training classes and are sent to China for the K-8 conversion.

Ever since Takoradi AFB was taken over from the British RAF in 1961, the flying training school (FTS) has been based there.

The first aircraft to fly there were Chipmunks donated by the RAF. Later on, Beavers, Otters and Caribous were used.



The FTS still has venerable Cessna 172s, although these haven't flown for years. Initial flying training is now completed on a Diamond DA42, operated by 1 Squadron.

After a selection process in Accra, student pilots get their initial 10 hours of flying experience on the DA42 before they are sent to Bristow Academy for helicopter pilots or the Flight Safety Academy for fixed-wing pilots, both in the US.

After the period overseas, students destined for the fixed-wing squadrons return to Takoradi for follow-up training on the DA42, while the helicopter pilots go directly to their squadron.

No 1 Squadron operates three DA42s. Of these, one (registered GHF120) fulfils the training role while the other two (GHF121 and 122) are dedicated surveillance aircraft. A DA42 simulator has also been procured from Diamond

to facilitate instrument flying training and in-flight failure training.

The GAF's intelligence, surveillance and reconnaissance (ISR) capability comes from the two surveillance DA42s, which are both equipped with the SAFIRE sensor suite. The aircraft were modified in the UK by DO Systems, which also supplied a dedicated DA42 crewman trainer simulator.

Their main roles are maritime surveillance, reconnaissance and internal security operations for the police forces. A regular crew consists of one pilot and one crewman, who operates the sensors.

A typical maritime surveillance mission can take up to 12 hours and can be flown in both day and night under visual flight rules (VFR) and instrument flight rules (IFR) conditions. The Hawkeye system allows real-time transmission of sensor data.

The Diamonds also contribute to the international organisation, Oceans Beyond Piracy. Together with the Ivory Coast, Togo, Benin and Nigeria, Ghana is responsible for Zone E and Zone F in the Gulf of Guinea. "There is cooperation between the navies and among the air forces in securing the coasts of these countries, so we do joint exercises at sea with the navy, with helicopters, for example, rappelling the special forces on to the ships," said Nagai.

The Diamond is also fighting against drug trafficking: "One time, it had to fly 350 nautical miles out to sea to bust a cocaine ship," said Nagai. "This mothership was anchored and was offloading goods on to smaller ships. With collaboration of the British and the Americans they got spotted. The navy could only go to 200nm, so we scrambled the Diamond and it



The Mi-171 carrying the Ghanaian flag. .
Top right: Fire crew training at the School of Trade Training at Accra.
Right: The K-8 strike aircraft.

PICTURES: GAF



took the pictures that were needed as evidence.”

There is also a Z-9 detachment at Takoradi, operating under 1 Squadron.

“Their base is in Accra but, at any time, we have one or two Z-9s in Takoradi, just in case Ghana Gas requires assistance.”

Besides operational aircraft, Takoradi AFB also houses a newly built Air Force Recruit Training School. Operational since July 2018, it carries out basic military training for new airmen as well as on-the-job training for when they pass out. Also, all personnel will be trained there to be sent out for future United Nations missions.

Every year between five and 15 student pilots get their wings.

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Furthermore there is cooperation with the outside world regarding technicians, as Nagai explained: “The Accra-based University of Ghana started running an aerospace engineering programme. They requested a decommissioned aircraft that could be used as a mock-up training device. So we delivered an MB339 and our engineers put it back together and connected the power so the systems could be run for training purposes.”

Also based at Accra AFB is the School of Trade Training (SoTT). “Students from the aerospace engineering department of the Kwame Nkrumah University come here for six weeks every year for practical training. After that, we are inundated with applications to join [the GAF]. Some airlines also send their technicians to do a course at the SoTT, showing the good collaboration we have within civil aviation.”

The smallest of the country’s three airbases regarding flying operations is Tamale, which was built in 1966 with help of the former Soviet Union.

One of the Casa 295s is based there, flying with 2 Squadron, although at the time of writing it was undergoing its initial heavy maintenance check with Airbus in Spain after being in service for six years.

Nagai said: “Most transport aircraft tasks originate from Accra. But this aircraft is based at Tamale because of the airborne forces, which are also based there. Its main task is supporting them during their parachute jumping training and deployments.”

Also assisting in this training is F-27 G521. This aircraft made the last operational flight of the type in 2013, after which it was delivered to Tamale.

“The Fokker 27 and 28 have done something like 35 years. They’ve really served us very well,” said Nagai. “Ask the engineers on the F-27 and they will tell you they would love to go back to Fokker. But, of course, Fokker has folded up; we’re not getting spare parts anymore, and they have done their duty. So they were decommissioned.”

One last aircraft – the Fokker 28 that used to fly the president of Ghana – is for sale and is kept in flyable condition. Its engines are being run regularly.

The Communication Squadron nowadays flies the president in a Falcon 900EX. “This aircraft is on the civil register, so the maintenance regime is strictly by the civil aviation regulations.”

Nagai also discussed plans to establish an air force base in the centre of the country, around Atebubu.

“The idea is to establish a helicopter squadron

there, so we could reach both north and south. Furthermore, there are plans to have a joint forward operating base (FOB) with the navy somewhere in the west, because of the oil find.

“All these are still on the drawing board, but the final approval, of course, needs to come from the government.”

There are also plans to expand. “The air force is already much bigger than when I joined in 1980. But, as the economy grows and the population grows, there will be new requirements,” said Nagai.

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The Super Tucano is high on his wish list. “In 2013 this came up. The chief of air staff at the time assessed the threat level and we looked at the capabilities of the Super Tucano and we recommended it to the government. It would be used both as a strike aircraft and a trainer.

“So far it didn’t get put though, but negotiations with the manufacturers in Brazil are not closed totally. We still need it and, while we are also looking for alternatives, the Super Tucano remains the key in our new acquisitions.”

The intention was to get four aircraft and one simulator, Nagai said: “We plan to base them at Tamale AFB to re-establish the flying training school there, attached to the brand new Air Force Leadership Training School that we have in Tamale now. A smart hangar has already been built there to receive the Super Tucano.”

Currently, there are no plans to get additional helicopters for the coming three to five years. An option for a fourth C295 will not be taken up for now.