

LGen STEVE LUCAS

A Repositioning of the AIR FORCE

With an RMC engineering degree in hand, Lieutenant-General J.S. (Steve) Lucas completed air navigator training, receiving his wings in 1974. After a series of command positions, he was appointed Commander of 1 Canadian Air Division. He later assumed the position of Chief of Staff, Joint Force Generation within the Deputy Chief of the Defence Staff (DCDS) group in 2003. He was promoted to Lieutenant-General in April 2004 and appointed Special Advisor to the Chief of the Defence Staff for Defence Policy Review and Homeland Security Issues. On May 16, 2005, LGen Lucas was appointed as Chief of the Air Staff (CAS), replacing LGen Ken Pennie who has retired following nearly 39 years of service to Canada.

With the aim of finding out just where the Air Force fits into the equation for combatting the new threat faced by Canada and her allies, *FrontLine* had the recent privilege of speaking with CAS to discuss these new challenges.

LGen Steve Lucas has three priorities for the Air Force: People, Operational Excellence, and Transformation.

Implementation of the new Canadian Forces (CF) vision is one in which all elements of the CF have a significant role to play, and CAS tells us that "air power is a key factor in the success of the Canadian

Forces vision, and the Air Force is the instrument by which air power will be delivered."

Depending on the mission of the moment, the vision allows for any one element (Land, Sea, or Air) to assume the "lead," with the others in support.

The Air Force will play a leading role in some areas, especially in the domestic realm, such as homeland security, while it will fill a supporting role in others.

In response to oft-cited concerns that the transformed CF will reduce the roles of the Navy and Air Force to little more than Army support teams, he is very

quick to point out that "support" is a key factor in the success of any mission – in fact, it is usually an essential element.

He reminds us that the Air Force performs supporting roles for many activities. "The important support role we are playing in Afghanistan right now is a good example. There is a key balance between the ability to play a lead role when required, and the ability to play a support role – and we want to make sure we have the capability to be able to do both well."

AEROSPACE

The "lead" for space matters is the Deputy Chief of the Defence Staff (DCDS) where the policy on the CF use of space is developed, but it is largely up to the Air Force to generate the people with the skills needed to make the most effective use of space in support of CF operations. Although the Navy and Army also have expertise in space, "Much of the capability, much of the expertise in space matters resides with people wearing the light blue Airforce uniform," says LGen Lucas.

Exchange postings with the Americans have given Canada opportunities to learn from the use of space. "We are looking to space to provide us with capability in the three key areas of surveillance, communication, and navigation – and the Air Force believes that this is an opportunity we can't pass up," explains CAS.

A new Aerospace Warfare Centre, to be established in Trenton, Ontario, next summer, is one of the instruments which will be used to ensure that people have a greater understanding of how space can be used in the future. Although the Air Force believes it has an important role to play here, it also realizes it needs to work closely with its Navy and Army confreres who also have an interest in space.

LGen Lucas recognizes that the Government has declined involvement with the U.S. on ballistic missile defence. "Quite clearly, our interest in space excludes missile defence, but there is an awful lot about space that is positive and can provide us with considerable capability.

"NORAD remains a cornerstone of our continental defence and our partnership with the United States is very strong. We have developed great relations with the Americans through our work in NORAD. The NORAD Agreement is coming up for renewal in 2006 and we are going to work very closely with the Americans on that, because we believe that the aerospace



AIR FORCE VISION
The Air Force will be transformed into an expeditionary, network-enabled, capability-based and results-focused aerospace force that will effectively contribute to security at home and abroad.

dimension remains important to the defence of North America.

"We believe we can do that separately from the decision on ballistic missile defence. There are tremendous benefits from the cooperation between our two countries. We are going to build on this as we move into the future," says CAS.

PRIORITIES

The Air Force feels that one of its main priorities will be to look after and invest in its people while continuing to maintain a relatively high operational tempo and completing the transformation process.

"A measure of our success is going to be keeping those three in balance," states LGen Lucas. "We had some difficult times during the downsizing in the nineties, and we've been living with the results of that. We are coming up with some creative ways of trying to generate capacity to deal with those limitations.

"People are uppermost in my mind. Finding ways of maintaining a proper balance is very important because we recognize that we cannot put too much pressure on people. They have responded magnificently, but you can go to the well once too often in that regard, so we need to make sure that we retain that proper balance."

RECRUITMENT

Defence is moving from a time when money was the limiting factor. Now, with the new monies announced in the budget, the number of skilled Air Force personnel will be the limiting factor for moving programs through the system. LGen Lucas believes that "it will be the people pressures that require us to prioritize the various procurements."

Although he does express concern about Air Force personnel levels, he understands why the Government has assigned the majority of the recently announced 5,000 new CF positions to support the Army. He acknowledges that Air Force support trades have been under pressure in recent years (partly because they have had to fill in for Army shortages). But because a number of these new positions will be in the Army support trades, it will alleviate strain in both the Army and the Air Force.

Furthermore, the Air Force expects to receive some additional positions for new capability areas such as UAVs.



MCPL BRIAN WALSH CANADIAN FORCES COMBAT

Capt Paul Anderson (pilot), and flight engineer Sgt Tony Kester wait as their CC-130 Hercules is unloaded in Bunia, in the Democratic Republic of Congo. This was the first Canadian flight to transport French troops into Bunia, as part of Operation Caravan.

MODERNIZATION

The CF 18 modernization program is well underway right now. The updated capabilities in the modernized jets are expected to gain another 10 or 15 viable years "so that we can fly comfortably beside our allies with the knowledge that we are making a significant contribution to any coalition effort. I am quite happy with the capability that is being generated by this upgrade to the CF 18."

Similarly, the Aurora is also undergoing extensive modernization and upgrades that will similarly extend its life by another 10-15 years.

NEW ACQUISITIONS

Fixed-wing SAR was identified by the Government over a year ago. It's a priority because it will replace two aging pieces of kit – the Buffalo, which is coming to the end of its life in 2010, and some of the older Search and Rescue C130s, which are also coming to the end of their estimated life expectancy. "The C130s are in high time military use right now and they require significant investment in terms of people and spares, and we would really like to move those pieces of equipment out of service and replace them with something modern and more capable. This project remains a high priority and the Department is working hard to ensure the new FWSAR aircraft is delivered in the shortest possible time. To this end, I believe we are on time to be able to provide the new FWSAR aircraft by the time the Buffalo is done," says CAS.

There are a number of areas where new capabilities have been identified by the Air Force. One is uninhabited aerial vehicles (UAVs) which will provide the Air Force with great opportunities for

improving its capabilities in the future – specifically for surveillance in the North. According to CAS, "this is an area where we have to pay more attention." Another priority identified in the 2005 Federal Budget is utility aircraft for the North.

The Air Force is looking at a number of options that straddle military requirements for medium-to-heavy lift helicopters. This priority has been drilled home by General Rick Hillier, the Chief of the Defence Staff, and it is also listed in the new budget. "We have recognized, as a result of a number of operations, but more specifically in Afghanistan, that the requirement to move a significant number of folk around quickly and securely – and with their equipment – is a key enabler," confirms CAS. "The alternative is to simply have a lot more people on the ground, but we don't have the luxury of that particular option, so the ability to move platoon-size organizations around the theatre of operations is important to us.



PHOTO: CPL WILLIE LANGER

New FWSAR aircraft will replace both the aging 'Buffs' and 19 of the oldest C130s shown here.

We don't have the capability to do that right now and it is something we're going to be working on fairly rapidly over the next while – it is a key priority for us."

The new Defence Policy makes deployability and responsiveness a key element. Accordingly, the CF should be able to respond quickly to get people and kit where they are needed and in a timely fashion. At present, it is clear to all Canadians that there is a lift "issue." The Air Force sees a combination of sea lift and air lift as the answer.

In response to questions regarding the viability of leasing such services, LGen Lucas clearly believes that the answer will involve a combination of methods. "While ownership is very attractive, from the availability perspective, I believe contracted airlift will be a component of any solution we develop. In assessing the ability to either own or have access to airlift, it is 'a given' that the contracted piece is necessary to achieve the surge element." To highlight this, he explains that it would not be fiscally responsible for Canada to own enough heavy airlift to be able to accommodate the surge capacity required for every emergency. And that is where the contracted piece fills a critical role.

A mobility study is underway right now looking into the full range of options. The goal is *assured* airlift capability that strikes the right balance between integral and chartered solutions. Once the decisions are made and contracts completed, the CF will no longer be limited by the ability (or inability) to access airlift.

And so, the debate continues.

"No decisions have yet been made, but we are keeping an open mind on this. We want to look at all options; we want to make sure that the decision-makers have all the facts in front of them. I, for one, am not in the camp that says we have to own everything. The importance for me is the *assured* element," stresses LGen Lucas, "and we are examining all options to find the best way to do that."

But what about the risks associated with civilian contractors? CAS dismisses that argument as overplayed. "I think there are certain kinds of tasks that we perform for which contracted services might be the right thing, and we are quite willing to accept certain risks. In many ways it is very attractive financially to have that contracted capability in your pocket, and therefore we are going to continue to look at the various options

with a desire to manage the risk properly and make sure that when we say '*assured*' that we all have a good understanding of exactly what that means. We are aware of the concerns about strikes, aircraft availability and things of that nature. We are going to factor all of that in and come to a decision."

SIMULATION

The Aerospace Warfare Centre will take key advantage of modeling and simulation (M&S). It will work with Army counterparts in Kingston, the Navy in Halifax, and with the CF Experimentation Centre in Ottawa. All of them will be linked to take full advantage of M&S opportunities as the Air Force moves into the future.

"Modeling and Simulation is a Canadian Forces priority and the Air Force is onboard. All three of my priorities for the Air Force – People, Operations and Transformation – are enhanced through a move toward modeling simulation," says LGen Lucas.

"Modeling and Simulation really is an engine of change that will allow us to move the transformation agenda forward. We've got some programs underway right now. The advanced distributed combat training system simulators for the CF18s allows us to link people in Bagotville and Cold Lake – this is a tremendous capability. We are also looking to link with the Americans' systems so that we can simulate flight with them as well.

"It is becoming more challenging to find places to train. Simulation allows us to train inexpensively and in some cases more effectively. We are looking to take the best advantage of these opportunities."

"On the people side, it is interesting to see how people approach simulators somewhat hesitantly at first. They are not quite convinced it will be as good as the real thing – but as they get into it, they recognize that it has a niche," says the Chief of the Air Staff.

"No one believes that simulation is the total answer, and of course you must have hands-on experience with the real aircraft, but it's a blend and combination that provides people with an advantage. When they get in the aircraft they feel a lot more confident because of skills they've already developed.

"From an operational effectiveness perspective, modeling and simulation allows us to train before we send people into theatre. We learn things from the

field and pass it back into the simulation realm, which then becomes more and more realistic, providing our people with the enhanced training and preparedness to go back into theatre again. We are moving forward a lot faster than we were, say, 10 or 15 years ago.

"Simulators are certainly making great strides forward specifically for maintainers. I visited 426 Squadron in Trenton where they have been one of the proponents of this. It allows tremendous advances. It's a quantum leap forward in the ability for people to learn more quickly and more completely, and that is something we are going to continue to exploit as time goes on."

HOMELAND SECURITY

Recognizing the concerns of Canadians, the Government has made it clear in the new Defence Policy Statement that the Defence of Canada is its number one priority. Acknowledging this, LGen Lucas confirms that "Homeland Defence is '*job one*' for the Air Force." In fact, he points out "we are moving to establish CanadaCOM, an operational headquarters focused on Canada as its theatre of operations. This will bring Army, Navy and Airforce together to ensure that homeland security is our primary focus." The Air Force and Navy have the largest roles in the domestic defence realm. Maritime security usually has a Navy/Air Force lead, and the Air Force has a key role in aerospace.

Border security, on the other hand, is more the responsibility of the Canada Border Services Agency, but the Air Force will be offering its assistance when necessary. One of the new ways of doing business will be to work more closely with other Government agencies. "We have platforms, such as uninhabited aerial vehicles (UAVs), which provide information for defence purposes, but can also provide capabilities for security or other purposes as well. It is something we will look at in the future to try and take the best advantage of sharing information – and sharing costs makes sense as well."

The new CanadaCOM will be working closely with PSEPC (Public Safety and Emergency Preparedness Canada) – an element of which is the RCMP. LGen Lucas sees room for improvement in terms of the way the groups work together. There are jurisdictional issues, legal and boundary issues that the CF must respect, but there are areas where

improvements can be made and he is enthusiastic about working with the other government agencies “because it’s all about homeland security and about making sure that we are as prepared as we can be. The airforce has a key role to play in the security of Canada and we’re going to be working with others to make sure we do the best job possible.”

INTEROPERABILITY

Interoperability is critical for the Air Force. The Defence Policy Statement makes it quite clear that Canada will most often be participating in multi-national efforts. This will involve the Air Force working with the Army and the Navy on a day to day basis. It will also mean working with other government departments and agencies. As CAS explains, “when you talk about domestic or homeland defence, it’s not just about the Canadian Forces, it’s about the CF working with a number of other agencies, and we have to ensure that we have the equipment and the procedures to work with them seamlessly.” Similarly, the CF will be working with both the militaries and agencies from other countries as well.

Interoperability at home and away is key to mission success. “We’re pursuing the use of modeling and simulation to achieve the interoperability goals that we believe are so critical,” LGen Lucas confirms. This means not only having equipment that “works” together, but having procedures in place – and conducting regular exercises with the other groups to help work out the kinks.

“We are going to be pushing the envelope a little with the inter-agency piece,” he continues. “We would like to get them as enthusiastic as we are right now so that we can train with them. We are already on board with a number of our major allies, specifically the Americans.”

A recent NATO exercise, First WAVE, was a great example of cooperative training. “Canada played a lead role on this. We had a number of the enablers that made it all work together, so we’re among the leading countries in this particular environment.

“I hope you get the sense that I believe this is a great time for Canada. We have opportunities now that didn’t exist ten years ago, and the Air Force is preparing to make the best of them.” ■

WRAP UP: by LGen Steve Lucas

This is a really great time to be taking on the responsibilities of Chief of the Air Staff and Commander of Air Command. Recent events and trends have me very optimistic about the way ahead for the Air Force; with the tabling of the new Defence Policy Statement and the significant support demonstrated by the Government of Canada through the 2005 Budget, we have an opportunity here to turn the corner and make real strides forward. I think these recent signals are great news for the Canadian Forces, and a welcome relief for the men and women of the Air Force who have persevered and continued to deliver through years of cutbacks.



LGen Steve Lucas, Chief of the Air Staff.

My focus, as I take over the position of Chief of the Air Staff, will be to create a proper balance between three essential priorities:

- The first thrust is continuing to look after our **people** and invest in them. Although the Air Force appears to be equipment and technology driven, it is our people, more than anything else, which makes us successful. We will need to ensure that we have the right number of people with the right tools and skill sets in the right positions in order to be able to succeed with the vision set out for us by the Government and by the CDS.
- The second is continued **operational excellence**. The men and women of the Canadian Forces are making a difference, day in day out, whether it is in the demanding Search and Rescue role, in conducting surveillance and sovereignty patrols watching the approaches to Canada and North America, or in theatres of operations around the world watching out for Canada’s economic, environmental and military security interests. We know that the Government of Canada and the people of Canada want us to perform these missions every day, around the clock, both here at home and in faraway and dangerous places, and we want to do them safely and successfully.
- The third area is the **transformation and modernization** of the Air Force. As an air force we are well positioned today to meet the Government’s expectations of 10 to 20 years ago and to deal with the threats of that era. We need to position ourselves such that we can deal with the threats and situations that are identified in the new Defence Policy Statement and espoused in the CF vision. Transformation is about acquiring new capabilities, taking advantage of existing capabilities, modernizing others and bringing them all together in a way that allows us to meet our obligations in the most effective way. For instance, the combination of existing radars, modernized Aurora surveillance aircraft and new Uninhabited Aerial Vehicles, linked with space-borne navigation and communications will permit us to more effectively carry out surveillance of Canada’s vast expanses and share that information with other government departments and agencies when required. Air Force visionaries have worked hard over the past several years to develop a vision for the future. An early task will be to ensure alignment between the great work that has been done on our Strategic Vectors document with the new vision contained within the Defence Policy Statement.

For the first time in many, many years, the future looks bright for the Canadian Forces and the Air Force. While there will still be challenges ahead, especially in the next two to three years as our ops tempo quickens and transformation begins to take hold, Canadians will see a very different and more integrated Canadian Forces begin to emerge before the end of the decade. The men and women of the Air Force will continue to play a vital role in serving Canadians within this transformed and revitalized Canadian Forces. ■