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# Airlift Capabilities for Future U.S. Counterinsurgency Operations

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## Summary

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U.S. armed forces are engaged in ongoing counterinsurgency (COIN) operations ranging from the highly visible, large-scale, high-intensity COIN campaigns in Iraq and Afghanistan to much smaller missions that rarely make headlines, helping friendly governments around the world combat internal enemies. The likelihood that counterinsurgency will continue to be a major focus of U.S. national security policy for the foreseeable future has revitalized debate about whether or not this type of warfare demands airlift forces with unique organization, training, equipment, and doctrines of employment in light of the operational contrasts between counterinsurgencies and more conventional conflicts.

This monograph recommends that the United States rely largely on its general airlift forces—headquarters, units, core aircraft types, etc.—to perform the counterinsurgency mission. With adjustments in employment doctrines and training, these forces can accomplish the majority of COIN missions effectively. Indeed, for most missions, the tactical elements of airlift missions in conventional and unconventional conflicts are much the same.

However, some COIN airlift operations will present planners with distinctive balances of operational details, such as the need to support a higher proportion of small, dispersed units and the locations and intensities of threats. Consequently, these differences in operational detail likely will require the United States to expand some parts of its general airlift forces and to acquire some COIN-specialized airlift capabilities for its own use and for that of governments under the

FID program. These additional capabilities may come in the form of new aircraft, such as small, fixed-wing transports designed for short, rough-field operations; unmanned aerial vehicles; satellite-guided precision airdrop systems; or other new systems able to enhance the airlift arm's ability to support numerous dispersed units and patrols operating clandestinely.

## **Strategic Effects of Airlift in Counterinsurgency**

After more than eight decades of experience, the logistical value of airlift in counterinsurgency is obvious and springs from the dependence insurgents have for sanctuary. Almost by definition, serious insurgencies tend to break out and mature in regions that are geographically or militarily remote from centers of governmental power. In the past, most insurgencies operated in geographically remote regions where their governmental enemies could not project power easily, if at all. Over the last several decades, some insurgent forces have fought within major cities, like Grozny and Baghdad, where their presence was a direct consequence of the effective remoteness of competent governmental power.

Airlift's strategic value in such circumstances is that it can accelerate the process of deploying government forces into sanctuary areas and then provide support for them. Airlift movements permit rapid concentrations of force and reduce the vulnerability of maneuvering ground units to logistical isolation and piecemeal destruction. This added security is particularly important to small, widely dispersed units that can rely on aerial resupply to sustain them in the field, to bring reinforcements, to evacuate their sick and wounded, and to withdraw them when they complete their missions. Thus, strong airlift forces permit COIN commanders to conduct operations flexibly and in depth without having to secure and defend extended ground lines of communication. (See pp. 17–19.)

The positive influence of airlift on counterinsurgent morale and confidence is also well documented and strategically important. Wherever they have benefited from it, counterinsurgent military personnel

have commented that airlift support reduced their sense of isolation, even when they were widely deployed during security-phase operations, and increased their confidence that they would be reinforced, supplied, and evacuated when needed. Airlift also reduces troop fatigue and wastage by improving diet and reducing the time and casualties incurred in moving into and out of battle areas. Rested and confident soldiers are not only more effective militarily, they are also likely to be more astute and restrained in their use of force and thus less likely to commit the mistakes in their use of the force that can undo counterinsurgencies as effectively as military defeats. (See pp. 19–21.)

## **Counterinsurgency Airlift Operations and Tactics**

Counterinsurgency airlift planners and operators should expect their priorities to match those of most other counterinsurgent commanders: (1) to suppress and defeat the insurgents' conventional capabilities, if these exist; (2) to suppress guerilla activity enough to permit effective security-phase government and economic activities; and (3) to mop up residual guerilla forces. Once insurgent conventional capabilities have been contained, many individual military operations, such as patrols and large-unit sweeps, will contribute simultaneously to all three objectives.

Counterinsurgency warfare imposes few tactical requirements on airlift forces that are unique to that mode of conflict. In the core areas of tactical decisionmaking—the selection of aerial delivery methods, formation versus single-ship operational choices, route selections, and so on—the political nature of a conflict largely is irrelevant. However, the level and ubiquity of the threats airlift faces may be greater in COIN warfare than in many other types of conflict, so COIN airlift operations must be planned and executed on the presumption that they could encounter serious or severe threat situations on almost any mission. COIN airlift planners and crews will have to practice such combat procedures as random scheduling, route selection, and approach procedures routinely. Transports operating in guerilla-infested areas ideally will have high-quality self-defense systems, and their crews must be

ready to use them at any moment. Once on the ground, these personnel must be as ready as their airlift support brethren to defend themselves and their aircraft. The need for airlift crews to be alert to threats and to employ appropriate countertactics is not unique to COIN operations. The differences from conventional operations in this case are that the locations of the threats may be harder to predict and that their frequency may be greater. (See p. 26.)

The tendency of guerilla and counterguerilla forces to operate in dispersed units during the security phase also shapes the tactical character of airlift operations. To a greater extent than in conventional operations, COIN airlift missions include small-scale lifts by one or a few aircraft to insert, support, and withdraw small units in remote areas. Very quickly, a conventional theater airlift fleet can run out of “tails” to support such dispersed operations. Mitigating this problem usually calls for some combination of incorporating smaller aircraft into the airlift fleet, having supported ground units carry more organic supplies, and/or using airdrops and multistop air-landing missions to make small deliveries to more than one unit in a single sortie. (See pp. 27–31.)

## Urban Warfare

Conducting military operations in urban terrain (MOUT) is an increasingly important and conceptually dynamic tactical arena. As experience and the increasing urbanization of the world’s population attest, cities have become and will continue to be frequent and decisive battlefields. Historically, helicopters have made the routine provision of MOUT airlift practical. Even in the most built-up areas, such open spaces as streets, rooftops, parks, and vacant lots provide endless opportunities for helicopters to land near or even amidst engaged troops.

However, helicopters are slower and more vulnerable than fixed-wing aircraft, problems of increasing concern. At their 110- to 160-knot cruise speeds, helicopters may take several minutes to traverse the threat “bubbles” of shoulder-fired missiles and up to a minute to fly into and then out of the range of heavy machine guns. Moreover,

the rotors, engines, transmissions, tail booms, and crew stations of the typical transport helicopter give enemy gunners far more opportunities to achieve single-hit catastrophic “kills” than they would have against fixed-wing aircraft of similar size and weight. In the face of advanced and future generations of light antiaircraft systems, the uncertain ability of rotary-wing aircraft to penetrate, egress, and survive over the urban “canyons” of modern war presents food for tactical thought. There are numerous options for improving MOUT airlift or reducing the need for it. Units conducting MOUT could move their supplies and evacuate their wounded on the surface, perhaps in armored transport vehicles. The Army could continue to improve its helicopters incrementally in performance and damage tolerance and/or introduce tilt-rotor aircraft into the mix. As in other areas of counterinsurgency airlift, precision airdrop systems, unmanned aerial vehicles, and small and agile fixed-wing transports also might take over portions of the MOUT airlift mission. (See pp. 31–32.)

## **Airlift Force Structure for Counterinsurgency**

At the strategic level, airlift gives counterinsurgent commanders greater freedom and confidence to choose the time and place of combat than they would have without it. At the tactical and operational levels, airlift remains an important enabler both for aggressive combat operations and for early support to civilian agencies operating during the security phase. Yet for all of airlift’s influence on the conduct of COIN warfare, counterinsurgency generally does not involve airlift mission types, operational concepts, or aircraft types unique from those of conventional warfare.

Given the continuities between the airlift requirements of counterinsurgencies and those of other types of conflicts, the existing “human” elements of airlift force structure—training and doctrine—require little specialization to combat insurgencies. The specialized materiel demands of COIN airlift are somewhat more complex. While the array of COIN airlift missions is much the same as for other conflicts, the balance among them is distinct. In contrast to conventional

conflicts between states, a counterinsurgent airlift effort likely will include a greater proportion of small-scale, quick-response military missions overshadowed by the possibility of encountering serious air defense threats. COIN airlift efforts also tend to feature a much higher proportion of nonmilitary or “nation-building” missions than more conventional operations. The distinctive mission balance of COIN airlift may require some alteration or expansion of the general airlift fleet to improve its ability to support such missions effectively.

The U.S. armed forces’ experience with the C-7 Caribou during and after the Vietnam War provides an instructive precedent. With a 500-mile operational range and 3-ton payload, the C-7 was inefficient compared to larger contemporary aircraft, except for moving very small loads, and every dollar spent on it was a dollar that could not be spent on larger “strategic” transports needed to reinforce Europe and South Korea in the event of communist attack. But the C-7 possessed a unique combination of moderate speed, economy of operation, and the ability to take off and land on rough fields that gave it offsetting value in COIN operations in Vietnam, where it filled the niche between heavy helicopters and medium-capacity theater airlifters. Heavy-lift helicopters could carry significantly heavier loads than the Caribou and had the advantage of their vertical takeoff and landing capabilities. But, within its capacity, the Caribou carried its loads much further and did so more efficiently. Larger fixed-wing aircraft carried yet larger loads much farther but required substantially wider, longer, and stronger airfields than the Caribou.

So, for providing small-capacity lift into remote sites or expeditionary airfields, the C-7 proved to be enormously valuable in Vietnam. It was particularly useful for resupplying outlying Special Forces camps because it provided quick-response lift to move dispatches, command personnel, medical supplies, and similar loads into tiny contingency airstrips during major ground sweeps and carrying casualties directly from remote battlefields to major evacuation hospitals. But equally important in light of the airlift needs of U.S. forces in other theaters, the relatively limited numbers of C-7s represented only a small diversion of resources from the overall airlift program and gave the airlift

fleet a niche capability of potential use in other types of conflict or, later, counterinsurgencies.

## Renewed Need for an “Assault Airlifter”?

From the late 1940s into the early 1960s, the Air Force and Army referred to the operational niche the C-7 filled in Vietnam as *assault airlift*. As a mission, assault airlift focused on providing direct airlift support using fixed-wing aircraft as far forward in the battle area as possible. Recent experience in Afghanistan and Iraq suggests that there may be a need to refill the C-7’s operational niche. However, this need should be understood as a shortfall in capability, not merely the absence of a particular class or type of aircraft from the airlift fleet. What airlift planners need is the ability to service scattered COIN forces and, perhaps, conventional units maneuvering beyond the reach of secure ground lines of communication. This does not necessarily require modern counterparts of the assault airlifters of earlier generations, particularly given the potential use of such new technologies as satellite-navigation-enabled precision airdrops, unmanned aerial vehicles, or guided parachute systems. The judicious acquisition and use of a combination of these and other systems could reduce, or even eliminate altogether, the need to acquire specialized COIN transport aircraft. (See pp. 41–42.)

If analysis does indicate the need to acquire specialized assault airlifters to meet COIN requirements, experience suggests two general program goals that DoD should emphasize. First, the aircraft designs chosen should emphasize capability for short takeoffs and landings from rough fields or vertical takeoffs and landings and high survivability over other design goals, such as cargo capacity and economy of operation. Short-field capabilities are the very reason for an assault airlifter to exist. Survivability is also essential, since assault airlifters operate very near the front or over unfriendly territory as a matter of course. Second, the purchase of specialized systems should be minimized. Ideally, an existing aircraft design, suitably modified, would be able to provide these capabilities, since funding an entirely new aircraft

would be an extremely difficult proposition in the current budget environment. (See pp. 47–50.)

## Foreign Internal Defense

The FID program, through which the United States helps foreign allies defend themselves against insurgencies and other internal threats, is central to U.S. counterinsurgency policy. FID programs range from assistance with economic and governmental infrastructure development to active support in combat operations and can help contribute to containing or defeating insurgencies against which U.S. forces might otherwise have to fight directly. Airlift has been a ubiquitous element of U.S. FID efforts since the 1940s, but recent experience indicates that hand-me-down transport aircraft are no longer an adequate element of the U.S. FID program. Maximizing the value of a long-term FID airlift program would include at least the following steps (see pp. 56–58):

- assessing the likely airlift requirements of the FID program in general and of specific partner states, over the next decade and beyond
- identifying and investing in a standardized combination of rotary- and fixed-wing aircraft and support systems able to fulfill the COIN operational requirements of states likely to receive U.S. FID support, which would minimize the costs of transferring the aircraft to supported countries and of supporting them afterward
- integrating U.S. and supported state airlift logistics, perhaps to include acquisition of some “FID-friendly” aircraft for the U.S. airlift fleet to facilitate the cost-effective provision and support of such aircraft for FID partner states
- preparing supported states to conduct effective airlift operations through a comprehensive program of education and training for the airlift and command personnel of supported states

- preparing U.S. airlift forces to conduct integrated operations with the ground and air forces of supported states.

## Conclusions

This monograph offers a general answer to the question of whether the United States should create airlift forces specialized for COIN operations or should instead rely on general airlift forces to perform COIN missions. In the end, it offers some good news and some bad news for air mobility planners and leaders in the future.

The good news is that the current U.S. airlift fleet, organizations, and doctrines are suitable for the great majority of missions incumbent in COIN operations. The majority of airlift missions in support of counterinsurgencies are simple logistics missions for moving people and things between established bases and/or moving personnel, combat units, and materiel over relatively short distances into landing zones and/or short and rough runways. Some or all of these missions will be performed in the presence of threats or under direct fire from air defense systems varying widely in sophistication and capabilities. But, and this is the critical point, none of these missions, operating environments, and threats are unique in basic character to COIN warfare. Thus, the nation's large and complex airlift system has the capability of delivering the goods in a counterinsurgent environment.

The bad news is that the United States cannot go on handling the COIN airlift mission much longer in the way it is without substantial reinvestment and perhaps some realignment of its airlift program. Given the current stresses on the aging theater and battlefield airlift fleets, the day is not far off when they will require total recapitalization. Given the current straits of the defense budget, the prospect of adding recapitalizations of the theater and battlefield airlift fleets to the mix of competing programs is daunting indeed.

Urban warfare will intensify the challenge of recapitalizing and perhaps restructuring the airlift fleet. For the moment, rotary-wing aircraft remain viable for the close-in delivery of people and materiel

to small units fighting in cities. But helicopters may not have the lift capacity and survivability to remain viable in future urban-based conflicts of any type.

Likewise, the airlift requirements of the U.S. FID program should influence the modernization of the national airlift fleet. Core U.S. airlifters, such as the C-17 and even the C-130, usually are beyond the operational needs and logistics capabilities of small nations. If the FID program is to provide viable airlift advice and support to such countries, the U.S. airlift program may need to include one or more “FID-friendly” aircraft types and specialist units designed to provide a foundation of appropriate support to countries fighting insurgencies directly or indirectly on the behalf of the United States.

This monograph concludes, therefore, by going somewhat beyond its original charter to recommend that DoD and the military services infuse fresh energy, rigor, and vision into their ongoing effort to assess future airlift requirements. A broad vision of the totality of the airlift mission will be a critical element of this effort. This vision must incorporate such planning elements as global logistics missions, responsive combat support, operations into “terminals” ranging from international airports to 200-meter-long jungle strips, allied requirements, FID, and new technologies and command relations. These considerations and new opportunities will dictate that the next model of the national airlift system, particularly its theater and battlefield components, will not simply be a refined version of the existing system, the basic elements of which were laid down in the late 1950s and early 1960s.