Chapter Five

SHAPING THE FORCES OF ASPIRING MEMBERS

The current status of military reform in the MAP countries largely determines the nature of shaping policies and the form of military cooperation established with their armed forces. Whether a MAP state is attempting to finalize its readiness for operations in a NATO framework or to set up a minimum credible deterrent, the current status and future direction of its military have profound implications for NATO defense planning. All MAP states face challenges in attempting to reshape their military forces, and certain states face particularly significant problems. These issues are the subject of this chapter, which assesses the status of military reform in each of the countries aspiring to NATO membership in order to identify shaping priorities in U.S. defense planning.

The analysis begins by assessing the general characteristics of the armed forces of the aspiring countries. Table 5.1 presents these characteristics for the current and future armed forces of the nine MAP states, broken down by service.

As the tables make clear, the limited manpower and general low technological sophistication and readiness levels of the individual MAP states mean that these countries have the potential to make only a minor (though not irrelevant) military contribution to NATO’s collective defense and power projection missions over the next 10 to 15 years. For the foreseeable future, these militaries will remain dominated by ground forces, and these countries’ defense budgets (except Slovenia’s) will continue to be much smaller (in an absolute sense) than those of current NATO members of similar size.
### Table 5.1
**Armed Forces, by Services: MAP States**

<table>
<thead>
<tr>
<th>State</th>
<th>Peacetime Active Force Size, 2000&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Planned Active Force Size, 2004&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Defense Expenditures/Troop, 1999–2000 (in US$)&lt;sup&gt;a&lt;/sup&gt;</th>
<th>2000 Army Peacetime (% of total force size)&lt;sup&gt;c&lt;/sup&gt;</th>
<th>2000 Navy Peacetime (% of total force size)&lt;sup&gt;c&lt;/sup&gt;</th>
<th>2000 Air Force Peacetime (% of total force size)&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>47,000</td>
<td>?</td>
<td>681</td>
<td>40,000</td>
<td>2,500</td>
<td>4,500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(85.1%)</td>
<td>(5.3%)</td>
<td>(9.6%)</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>79,760</td>
<td>50,000</td>
<td>3,573</td>
<td>42,400</td>
<td>5,260</td>
<td>18,300</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(53.2%)</td>
<td>(6.6%)</td>
<td>(22.9%)</td>
</tr>
<tr>
<td>Estonia</td>
<td>4,800</td>
<td>~7,000&lt;sup&gt;d&lt;/sup&gt;</td>
<td>11,875</td>
<td>4,320</td>
<td>250</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(90.0%)</td>
<td>(5.2%)</td>
<td>(2.9%)</td>
</tr>
<tr>
<td>Latvia</td>
<td>5,050</td>
<td>~8,000&lt;sup&gt;d&lt;/sup&gt;</td>
<td>9,109</td>
<td>2,400</td>
<td>840</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(47.5%)</td>
<td>(16.6%)</td>
<td>(4.2%)</td>
</tr>
<tr>
<td>Lithuania</td>
<td>12,700</td>
<td>~15,000&lt;sup&gt;d&lt;/sup&gt;</td>
<td>9,764</td>
<td>9,340</td>
<td>560</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(73.5%)</td>
<td>(4.4%)</td>
<td>(6.3%)</td>
</tr>
<tr>
<td>Macedonia</td>
<td>16,000</td>
<td>~20,000</td>
<td>7,313</td>
<td>15,000</td>
<td>N/A</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(93.8%)</td>
<td></td>
<td>(4.3%)</td>
</tr>
<tr>
<td>Romania</td>
<td>207,000</td>
<td>112,000</td>
<td>2,614</td>
<td>106,000</td>
<td>20,800</td>
<td>43,500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(51.2%)</td>
<td>(10.0%)</td>
<td>(21.0%)</td>
</tr>
<tr>
<td>Slovakia</td>
<td>38,600</td>
<td>30,000</td>
<td>9,119</td>
<td>23,800</td>
<td>N/A</td>
<td>11,500</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(65.0%)</td>
<td></td>
<td>(29.8%)</td>
</tr>
<tr>
<td>Slovenia</td>
<td>9,000</td>
<td>~9,000</td>
<td>38,333</td>
<td>8,780</td>
<td>100e</td>
<td>120e</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(97.6%)</td>
<td>(1.1%)</td>
<td>(1.3%)</td>
</tr>
</tbody>
</table>

<sup>a</sup>Data from Table 4.6.

<sup>b</sup>Data from various ministries of defense and national news sources. Where a reform plan is in place, the actual figure is given; where a reform plan is under discussion, an approximate number is provided.

<sup>c</sup>Data from IISS, *The Military Balance, 2000–2001*. Percentages may not add up to 100 because of central, headquarters, and other troops not included in the service totals.

<sup>d</sup>Estonian, Latvian, and Lithuanian forces will be highly integrated as part of Baltic cooperation.

<sup>e</sup>Slovenia’s air and naval elements are part of its army.

In general, their most valuable contributions to NATO missions will come from their ground forces. In terms of relevant air force contributions, the MAP states will have little more than token forces to offer (and sometimes not even that). In the short- and mid-term, the most important benefit to be gained by NATO and USAF from the enlargement process could be NATO’s unconstrained access to and use of the aspiring members’ infrastructure and airspace. In other words, their limited military capabilities notwithstanding, the new
and aspiring members will provide geostrategic depth to NATO, making NATO’s power projection mission easier in and around Europe.

OVERALL CHALLENGES

The MAP states face many challenges in attempting to reform their militaries. Their military establishments show the legacy of the communist-style model (with its emphasis on ground-forces-dominant, mass-based, and heavy forces) in their training, doctrine, and equipment and in the fact that their officer corps was accustomed to resources being prioritized for defense and the military being autonomous from civilian political leaders. Because of this legacy, the quality of the MAP countries’ contribution to NATO operations hinges on a number of factors, including the effectiveness and pace of asset modernization; improvements in training and readiness; adjustment to NATO’s doctrine, tactics, and procedures; and the initiation of planning under conditions of civilian control of the militaries and serious constraints on resources. Most of all, a given MAP state’s optimal contribution to NATO implies adoption of planning techniques that integrate resource availability with strategies and needs (an integrated planning, programming, and budgeting system akin to the U.S. PPBS is one example).

With a well-thought-out plan of development, wise investments in modernization, and increased operations and maintenance (O&M) spending, the armed forces of the MAP states eventually could make a meaningful, if small, military contribution. NATO can help shape the choices the aspiring members make in their plans, though NATO’s preferences may not always be the same as those of the aspiring members. How the two are reconciled is of significant interest to NATO from the standpoint of future operations in and around Europe.

Use of Resources

Theoretically, and purely from NATO’s perspective, the MAP states should use their resources to provide NATO with forces that promote maximum efficiency at the alliance level. Since efficiency in this case entails a measure of specialization in order to build on NATO’s cur-
rent assets and take advantage of potential members’ comparative advantages, the MAP states stand to contribute more to NATO if, instead of building up their forces across the board, they emphasize specific branches of service, build on existing strengths, and focus on the prospective missions their armed forces might undertake.

Generally, optimal efficiency within an alliance is not achievable, because alliances are not all that efficient in providing military forces—there is much duplication and inefficiency in the use of resources. However, NATO is in a unique position to ensure a large measure of efficiency in the MAP states’ force development because of its leverage and the incentives the MAP states have to adjust to NATO’s preferences. In this sense, the more a MAP state wants to join NATO, the more it can be expected to adjust to NATO’s preferences for force development. To cite one example, Estonia’s perceived dependence on NATO to safeguard its long-term security means that Estonia is likely to follow NATO’s advice in developing its military.

These incentives diminish for a MAP state once it is invited to join NATO. At that stage, and especially after the country becomes a NATO member, NATO’s formal means for shaping its force development are limited to such mechanisms as target force goals1 and coordination of defense policies, supplemented by a variety of informal mechanisms and bilateral and multilateral fora. Although informative, these mechanisms cannot force a member to subordinate its own preferences in defense policy to what would be best from NATO’s perspective, as befits a democratically based alliance such as NATO. Indeed, establishment of the MAP mechanism shows an understanding of such an incentive structure (as well as lessons learned from the initial 1997–99 round of enlargement), since MAP’s military aim is to effect changes in each state’s armed forces prior to its accession.2 None of what has been said here should be interpreted to mean that NATO should take a domineering course of ac-

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2MAP, with its bilateral meetings, consultations, and feedback to the defense officials of the MAP states, approximates NATO’s target force goal process but includes real incentives for the given states to meet NATO’s recommendations.
Shaping the Forces of Aspiring Members

...tion vis-à-vis the MAP states. What it does mean is that NATO has the means to shape defense planning in the MAP states by advancing real reform that, in the end, is beneficial to both the MAP state and NATO.

Individual country choices in the aspiring states are likely to emphasize domestic considerations at the expense of NATO’s needs. Thus, from NATO’s perspective, country choices are likely to yield a less efficient use of resources, driven by factors such as prestige, economic motives (desire to keep a semblance of an industrial base in place in specific areas), pork-barrel democratic politics, or incompletely developed planning and procurement MoD processes. But the end result may be that each MAP state attempts to embark on a costly modernization program that could result in a highly inefficient outcome. In this sense, NATO’s preferences will amount to countervailing tendencies regarding the preferences that result solely from the aspiring member’s decisionmaking processes. It is in this sense that the enlargement process can assist aspiring members in building a more effective military establishment for deterrence purposes, contributing more efficiently to NATO’s missions, and implementing an efficient resource management and planning system to free up resources for non-military parts of state budgets.

Besides maximizing NATO’s gains, greater efficiency in defense spending is optimal for all concerned. Greater specialization emphasizing ground forces produces an enhanced deterrent in that it provides prospective members with stronger ground defense capabilities and a consequent lower likelihood that NATO will be called on to provide assistance and reinforcement. In addition, aspiring members gain because their contribution to NATO is more valuable and their role in NATO and their security are enhanced.

“Oversized” and “Emerging” MAP Armed Forces

An examination of the armed forces of the MAP states reveals two common patterns: oversized militaries and emerging militaries. The first pattern fits MAP countries that were states prior to 1989 (Bulgaria, Romania, and Albania) or that inherited a largely intact armed forces from a former state (Slovakia) and have continued to field armed forces larger (in terms of structure, manpower, and equipment) than the armed forces of NATO countries of similar size.
These “oversized” armed forces have had to adjust to far-reaching cuts in defense budgets and a redirection of resources away from them and toward their countries’ transitioning economies, which means that their quality has suffered. Because most of the remaining defense budget goes to support the still extensive personnel structure, these countries have cut back on O&M allocations and have reduced procurement to almost negligible levels. Lack of funds for spare parts and maintenance has led to large quantities of non-operational equipment. As a result, these militaries tend to be of mediocre quality, with shortcomings in training and a larger share of obsolescent or obsolete equipment than is found in the militaries of comparable-size NATO countries. Moreover, these problems are magnified in technology-intensive services, such as the air force.3

This group of MAP countries with oversized militaries has problems similar to those faced by new members Poland, Hungary, and the Czech Republic, though the oversized MAP militaries tend to have more obsolete equipment and larger training and readiness problems. Of these MAP countries, Slovakia has the most-modern equipment, on a par with that of Poland and the Czech Republic, and Bulgaria and Romania come next. Albania has equipment that is not only obsolete (World War II or Korean War vintage) but mostly non-functioning; indeed, the Albanian state itself has not recovered fully from its collapse in 1997.

The second pattern, that of emerging militaries, fits the MAP states that gained their sovereignty in the early 1990s (Estonia, Latvia, Lithuania, Macedonia, and Slovenia) and have had to build their armed forces essentially from scratch. These “emerging” militaries exhibit basic problems—lack of equipment and lack of trained personnel. Among them, Slovenia fields the best forces (because of its relative wealth), and Estonia, Latvia, and Lithuania follow. Macedonia’s armed forces are still at an early stage of development.

CHALLENGES RELATED TO AIR FORCES

The ongoing integration of Poland, the Czech Republic, and Hungary into NATO offers lessons for the integration of the MAP states. The experience so far shows that, arguably, one of the most difficult problems facing the new members is modernization of their air forces. The large costs of modern combat aircraft, the limited utility of existing Soviet-made air assets for NATO operations, the generally limited defense resources, and the multiple priorities—all of these, together, prevent the new members’ air forces from being able to take a meaningful part in NATO air operations. The problem is apparent in the divergence between the progress in interoperability and the significant (brigade-size) forces that each new member has assigned to NATO’s land Rapid Reaction Forces (RRF LAND) and the corresponding slower progress and low assignment of air units to NATO.4 This divergence is also illustrated by the three new members’ participation in NATO’s peace operations in the Balkans. Each of the three contributed a battalion of either light infantry or engineers to NATO’s IFOR/SFOR operation in Bosnia-Herzegovina, made ground troops available for the potentially intensive operations in Kosovo, and contributed units (up to battalion size) to NATO’s Operation Joint Guardian in Kosovo. But NATO neither expected nor desired combat air contributions from these new members during Operation Allied Force. The fact that the three most affluent former non-Soviet Warsaw Pact states with the most-modern forces have encountered such problems with air force modernization and integration suggests that the less-modern and poorer MAP states will encounter even more problems. And these problems are multi-dimensional and defy easy solutions.

Equipment: Combat Aircraft

Whereas the emerging armed forces are in the process of building their air forces and currently possess little equipment of any kind, three of the oversized armed forces—those of Bulgaria, Romania, and Slovakia—have both extensive experience with advanced aircraft and

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small numbers of modern (fourth-generation) combat jet aircraft. These three oversized air forces still show the legacy problems common to former communist countries—large equipment holdings dominated by obsolescent or obsolete airframes whose maintenance has been suspect over the past decade. With improvements in training, modernization of equipment (upgrades to avionics and armament), and a change in operational doctrine, the interceptor and ground support assets of these three aspirants eventually could operate alongside NATO air forces. However, these assets probably would be used only in their home countries, since the extensive costs associated with their operating in NATO’s power projection missions seem to exceed both the benefits of and the need for such assets. Table 5.2 presents a general look at the MAP countries’ air force inventories. The tables in the Appendix provide more-detailed information about the equipment inventories of the MAP countries.

<table>
<thead>
<tr>
<th>State</th>
<th>Advanced Combat Aircraft</th>
<th>Older- Type Combat Aircraft</th>
<th>Armed Jet Trainers</th>
<th>Fixed-Wing Transport (medium)</th>
<th>Combat/ Assualt Helicopters</th>
<th>Combat Support Helicopters</th>
<th>Light (Utility) Aircraft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Estonia</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Latvia</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lithuania</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Macedonia</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Romania</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Slovenia</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

SOURCE: IISS, Jane’s, Teal Group Corporation, individual ministries of defense (MoDs).

5 Albania’s air force is discussed below, in the section on the emerging militaries.
Since Bulgaria, Romania, and Slovakia have equipment similar to that of the three countries that joined NATO in 1999, the experiences of those newest members in adjusting to NATO are illustrative. Appendix Tables A.1, A.2, and A.3 provide an inventory of aircraft for Bulgaria, Romania, and Slovakia. Poland and Hungary have a small core of modern combat aircraft, MiG-29s (22 and 28, respectively), and all three countries have substantial numbers of obsolete or obsolescent aircraft (MiG-21s, MiG-23s, Su-22s, and Su-25s). By 2004, Poland plans to retain only its MiG-29s and some 60 Su-22s, both types modernized substantially to allow operation in a NATO framework. Hungary will retain only modernized MiG-29s for combat duties. The Czech Republic is procuring a new, indigenously designed light attack jet, an L-159, which will form the mainstay of its air force. For purposes of comparison with the three oversized MAP states, Table 5.3 presents a general look at the inventories of the three members that joined NATO in 1999.

Each of the three new members has expressed interest in procuring NATO-type aircraft as it phases out its obsolete Soviet-built aircraft. At various times, Polish officials have spoken about procurement of 60 to 120 new aircraft, Czech Republic officials about 24 to 36, and

Table 5.3

<table>
<thead>
<tr>
<th>State</th>
<th>Advanced Combat Aircraft a</th>
<th>Older-Type Combat Aircraft b</th>
<th>Light Jets/ Armed Trainers c</th>
<th>Light Jets/ Armed Trainers d</th>
<th>Fixed-Wing Transport (medium) e</th>
<th>Combat/ Assault Helicopters f</th>
<th>Combat Support Helicopters f</th>
<th>Light (Utility) Aircraft g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Rep.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hungary</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Poland</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

SOURCE: IISS, Jane’s, Teal Group Corporation, individual MoDs.

aMiG-29.
bMiG-23, MiG-21, Su-25, Su-22.
cL-39, TS-11.
eMi-24, Mi-8/17.
fMi-8/17, W-3.
gIncludes both fixed- and rotary-wing; may be armed.

hServiceability questionable.
Hungarian officials about 30 to 50. The choices appear to be down to the F-16, the F/A-18, and the JAS-39 Gripen. Whether the three new members will manage to find the resources to procure the equipment and the support packages they project and, equally important, whether they will be able to afford the training required to make these weapon systems effective are questions that cannot yet be answered. Currently, it is clear that these countries cannot afford either to purchase or sustain the new aircraft. Indeed, their defense officials began their search for a new fighter aircraft in 1992, but lack of funds, as well as repeated formal and informal urging by NATO and U.S. defense officials to procure more badly needed equipment, led to delays in the decision on the fighter.

In comparison with the three new members, the MAP countries face greater budgetary limitations, which represent the biggest constraint on modernization of their air assets. For example, the cost of 24 new F-16 or F-18 fighter aircraft (one squadron) and the support package is in the vicinity of $1 billion, and this amount does not include armament for the aircraft or the O&M costs necessary to use the aircraft properly. With a slow, multiyear phase-in of such aircraft, and especially if the aircraft were “cascaded” free of charge, Poland probably could make a successful switch to NATO-type combat aircraft in this decade given its relatively large defense budget and assuming it will make further progress in military reform. The Czech Republic and perhaps Hungary (if it can surmount the hurdle of its...

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6Since 1993, there has been a great deal of discussion in the three new member countries about procurement of new fighter aircraft. And since 1993–94, Lockheed Martin (F-16), McDonnell Douglas (F-18), and Saab and British Aerospace (Gripen) have engaged in intense marketing efforts in the former communist countries in central Europe (see Bjorn Hagelin, “Saab, British Aerospace and the JAS 39 Gripen Aircraft Joint Venture,” European Security, 7:4, Winter 1998, pp. 91–117).

7The unit cost of F-16C/D to the USAF (in FY’98) was $26.9 million; the unit cost of F/A-18C/D to the USAF (in FY’98) was $39.5 million. (Data based on congressional sources compiled at http://www.fas.org/man/dod-101/sys/ac/f-16.htm and http://www.fas.org/man/dod-101/sys/ac/f-18.htm.) The Foreign Military Sale (FMS) of 70 F-16C/D Block 50+ aircraft to Greece in 1999 cost $3.1 billion, meaning a unit cost of $44.3 million. The FMS of 60 F-16C/D Block 50/52 aircraft to Israel in 1998 cost $2.5 billion, meaning a unit cost of $41.7 million.

8As NATO members, the three countries that joined in 1999 are eligible for NATO cascading. The United States already has transferred some major excess equipment to the new members (for example, a U.S. Perry-class frigate was transferred to the Polish Navy in March 2000, and another frigate is to follow).
low defense budget) also might be able to do so. But the $1 billion amount far exceeds the total annual defense budget of every one of the nine MAP countries, which means that new supersonic combat aircraft are currently simply beyond their reach. Even if the oversized MAP air forces (with experience in use of fourth-generation aircraft) were to acquire used F-16 aircraft free of charge, their current defense spending patterns and inventories indicate that they could not maintain and operate the equipment properly. The funds required to operate a squadron of aircraft such as F-16s and F-18s in a manner approaching NATO training standards would again exceed or form a majority of the O&M share of these countries’ total defense budgets.

What defense planning strategies would then be most effective for the MAP states? In view of the current benign security environment and the multitude of urgent needs connected with integrating their military establishments into NATO, putting off any procurement of combat aircraft for now makes sense. A reasonable alternative, with long-term integration in mind, is to reduce inventory through a massive phase-out of existing assets, modernize one or two types of combat aircraft in the current inventory, and lease or purchase small numbers of used F-16s or F-18s (also implementing NATO training and doctrine and making much greater use of simulators). These steps will begin the process of achieving greater compatibility with NATO operations.

In this light, Romania may have acted prudently by delaying its procurement of new combat aircraft for a decade and proceeding instead with a thorough modernization of the MiG-21 to secure its air sovereignty in the near- and medium-term. This decision will prove especially useful if it allows for more intensive and NATO-style training and thus provides for an interim period of familiarity with

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9Since 1996, the United States has offered Poland, the Czech Republic, and Hungary a no-cost five-year lease of small numbers of either F-16s or F-18s, with the lessees paying for setting up the necessary infrastructure, training, and spares. For a variety of reasons, none of the three countries has yet taken up the offer, though the deal would allow for a gradual transition to a NATO-type aircraft. A five-year lease of 18 used aircraft to Poland has been estimated to cost approximately $200 million. (Andrew Doyle, “Pole Position,” Flight International, April 28–May 4, 1999, pp. 42–44.) As of late 2000, an agreement on a transfer of 16 F-16A/Bs to Poland, together with an upgrade package, appeared to have been reached.
NATO tactics and doctrine. However, the modernization of the MiG-21s must be accompanied by a large inventory reduction in the Romanian air force if there are to be O&M savings that can then be applied to increased training and readiness. Bulgaria’s plans to withdraw from service all but its MiG-29s and Su-25s follow the pattern of the three NATO members that joined in 1999 and represent a move in the right direction. In contrast, Slovakia’s continued use of small numbers of several combat aircraft types raises questions about the maintenance burden of such an inventory and suggests that a streamlining process is in order.

As for the “emerging” MAP militaries, their air forces are miniscule compared with those of Bulgaria, Romania, and Slovakia. Estonia, Latvia, Lithuania, Macedonia, and Slovenia have little equipment of any kind, much less jet combat aircraft. Given these countries’ low defense budgets, their procurement of supersonic combat aircraft is neither realistic nor advisable. Tables A.4 through A.8, in the Appendix, provide details about these five MAP countries’ air force inventories. An inventory of the Albanian air force is also included, as Table A.9, in the Appendix. Albania properly belongs within the oversize group but has divested itself of its air force by allowing it to fall into a state of disrepair and non-serviceability and thus fits the “emerging” pattern at this point.

Training

Slovakia, Romania, and Bulgaria face similar, if more severe, training problems than were encountered by Poland, the Czech Republic, and Hungary. Indeed, although the equipment modernization problems facing these three oversized MAP armed forces are undoubtedly serious, the low serviceability of aircraft and limited training available to their aircrews are much more serious. Current levels of flight hours for pilots in Slovakia, Romania, and Bulgaria

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10The Romanian modernization program covers 110 MiG-21s (first batch delivered in 1997) and includes advanced avionics and PGM capabilities for ground support and Rafael Python 3 and R-73 air-to-air missiles (AAMs) for air defense. In addition, a new training program for aircrews is supposed to be modeled on training methods in NATO countries. (“Military Aviation Review: Romania,” World Airpower Journal, 31, Winter 1997.)
range from 30 to 45 hours per year.\textsuperscript{11} In contrast, the three members that joined in 1999 have raised their flying hours to 100 (or more) per year for a select group of aircrews assigned to NATO command and plan to increase these rates further, to 160 to 180 hours, by 2002. Since NATO expects 180 to 240 flight hours in its air forces, the figures in the MAP states seem barely adequate to ensure basic flight proficiency. The low training levels will have consequences down the road, making joint operations and integration of these air forces into NATO difficult.

The problems defy easy solutions because of the incompatibility in aircraft design and doctrine of the former communist states and NATO. To give one example, the Soviet-designed aircraft are expensive to operate and maintain compared with the main NATO-type aircraft. Some of the elements of the Soviet aircraft are rugged but require frequent maintenance; for example, the overhaul levels for their engines are three to four times those for the engines in NATO’s main combat aircraft. Such aircraft would be extremely costly to operate if aircrew training were to approach the levels expected by NATO. Moreover, the aircraft were designed for short-range missions with a doctrinal emphasis on ground-control guidance rather than pilot initiative. This doctrine will have to change and aircrews will have to be used differently if these forces are to realize a payoff from increased training. Such training will be enormously expensive, however. One option is to attain higher training levels by re-engineering the MiG-29s to lower their high operating costs. Nevertheless, design limitations mean that aircraft such as MiG-29s, even if made compatible, are far from ideal platforms in a NATO environment. After a certain point, the costs of extensive modernization begin to look questionable compared with the costs of used F-16s or F-18s.

The implication of this discussion is that equipment, and especially the potential procurement of new combat aircraft by the former communist states, cannot be seen in isolation from improved training and adoption of NATO air doctrine. Substantial investments are needed in both areas. Even with optimal investments, it will be

\textsuperscript{11}The country-specific data are as follows: Bulgaria, 30 to 40; Romania, 40; and Slovakia, 45 (\textit{The Military Balance}, 2000–01. London: International Institute for Strategic Studies).
many years before the aspiring members reach the standards of versatility and proficiency common among the pre-1990 NATO members. The oversized MAP armed forces will have the more difficult time meeting NATO training standards, unless they use their resources optimally. None of the problems is unexpected or insurmountable, but all will take time and effort to overcome.

**Equipment: Support Aircraft**

Three of the oversized MAP air forces—those of Slovakia, Romania, and Bulgaria—have some small and mid-size transport aircraft (An-24s and An-26s in all three states, and several C-130s in Romania) that could play a role in NATO operations. However, these aircraft suffer from the same serviceability and training problems that apply to combat aircraft. Their usefulness appears limited to supply operations in support of any of their ground-force contingents that may be participating in NATO peace operations. None of the MAP states has tanker aircraft or early warning aircraft suitable for operations in a NATO framework.

**Equipment: Army Aviation**

The experience of Poland, the Czech Republic, and Hungary indicates that the problems affecting fixed-wing aircraft may apply to a lesser degree to rotary-wing aircraft. A Czech helicopter detachment took part in NATO’s Implementation Force (IFOR) operations in Bosnia-Herzegovina, and Czech Mi-17s took part in March 2000 in a NATO field-training exercise in northern Norway in extremely demanding winter conditions. Polish utility helicopters have taken part in joint exercises with NATO units, and all three new members intend to assign helicopters (transport and combat) to NATO’s planned Immediate Reaction Task Force Land (IRTF [L]). Since Slovakia and Bulgaria have equipment similar to that of these three newest NATO members, a similar contribution can be reasonably expected from them. The main combat helicopters of the three new members and Slovakia and Bulgaria are Mi-24s, rugged aircraft that still retain combat potential and could be a force multiplier in NATO’s operations in the Balkans. Modernized Romanian IAR-330s, which are based on a French design, should be even easier to fit into NATO operations. None of this is to downplay the problems associated with
compatibility, spare parts, and training that have affected army aviation in the three new members and the oversized MAP armed forces, but the experience does suggest that army aviation may be a more achievable pathway to a meaningful air contribution and a natural complement to a ground forces focus for the MAP states.

**Equipment: SAMs**

In terms of medium- and high-altitude surface-to-air missiles (SAMs), the three oversized MAP armed forces follow the pattern of Polish, Czech, and Hungarian forces, though Romania’s holdings are not as modern. Tables 5.4 and 5.5 provide an inventory of SAM holdings that have more than tactical capabilities (excluding man-portable and self-propelled low-altitude SAMs) for the MAP states and the new members, respectively.

Other than Bulgaria, Slovakia, and Romania, the MAP states have neither combat aircraft nor SAMs capable of posing a threat to aircraft flying at altitudes over 10,000 feet. As such, they currently have no means of their own to ensure sovereignty over their airspace.12

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<tr>
<th>State</th>
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SOURCE: IISS, *Jane’s*.

*Serviceability questionable.*

12Lithuania has some L-39 (subsonic) armed jet trainers, giving it a symbolic means of ensuring its own air sovereignty.
Table 5.5
Medium- and High-Altitude SAM Inventory, 1999:
New (1999) NATO Members

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SOURCE: IISS, Jane’s.

³Modernized.

Airspace and Infrastructure

The greatest contribution that the MAP countries can make to NATO’s future air operations is to allow NATO uninhibited access to their airspace and to provide the infrastructure needed to support NATO’s missions in and around Europe. Access to bases in these countries can extend the operational range of USAF combat aircraft operating in central, eastern, and southeastern Europe and decrease the need for aerial refueling. Figures 5.1 and 5.2 are maps illustrating the availability of airfields suitable for NATO use (permanent-surface runways that are in good condition and over 8,000 feet in length) in the northern and southern MAP and new member states. Runways over 8,000 feet are generally adequate for fighter operations and strategic airlift (of course, not all airfields with longer runways have adequate ramp space to support airlift operations). The maps are far from exhaustive, as there are many airfields in the 6,000 to 8,000 foot range that could be used for NATO operations. There are also other airfields, currently assessed to be in less than good condition, that could be brought rapidly to operational levels.

The accession of Poland, Hungary, and the Czech Republic has already provided much geostrategic depth to NATO, especially in the north. Access to Polish airspace and bases has given NATO the reach needed for hypothetical contingencies in the Baltic Sea littoral or the western part of the former USSR. Access to Czech infrastructure is useful from the perspective of supporting NATO operations in Poland, and access to bases in Hungary (Taszar and Budapest-Ferihegy) already has proved useful in NATO’s peace operations in the former Yugoslavia. But the Kosovo air operation showed the value of access to Slovak, Romanian, and Bulgarian airspace. In fact,
the closing of Romanian and Bulgarian airspace to Russian air trans-
ports at a crucial time probably saved NATO an acute confrontation
with Russia in the final stages of Operation Allied Force. In the fu-
ture, unconstrained access to Romanian and Bulgarian bases would
be especially useful in case of contingencies in the Black Sea littoral,
the former Yugoslavia, Moldova, or Ukraine. Should bases in or ac-
cess to airspace over Turkey or Greece be unavailable, the value of
Romania and Bulgaria for NATO operations would increase (as was
the case during Operation Allied Force, when NATO’s access to
Greek airspace was limited). Access to Slovak airspace (in conditions
of no access to Austrian airspace) is important, as it provides a link to
Hungary from the northern NATO countries and allows greater depth
for operations by support aircraft (tanker aircraft during Operation
Allied Force).

The experience with new members sheds some light on the state of
infrastructure in the MAP countries. NATO has ruled out explicitly
the permanent basing of air or ground units in new member states
under the conditions of the current benign security environment. If
that environment continues to hold, the infrastructures of the new
NATO countries will be used only for temporary and occasional
training deployments by forces from other NATO countries. Of
course, if the security environment were to change for the worse, the
infrastructures of the new member states might become important
for other NATO members’ air forces, including the USAF. But the
more likely scenario is that the infrastructures of new members will
become important for NATO air forces by way of NATO’s stability
operations and conflict prevention. In this sense, the MAP states’
infrastructures could be used for USAF forward operating or support
locations.13

Currently, few bases in the MAP states meet all NATO standards for
safe operations. However, most of the needed improvements are
minor (for example, navigational aids) and could be made quickly if
needed. Detailed NATO surveys of airbases in the MAP states, as well

13Paul S. Killingsworth, Lionel Galway, Eiichi Kamiya, Brian Nichiporuk, Timothy L.
Ramey, Robert S. Tripp, and James C. Wendt, Flexbasing: Achieving Global Presence
Figure 5.1—Map Showing Infrastructure: Northern New Member and MAP States
as experience with the similarly structured bases in the three new member states, provide the necessary data on what to expect and what is needed. Even without such improvements, NATO operations from bases in MAP states are feasible with a little advance planning and preparation. On a number of occasions, both pre- and post-accession, U.S. and other NATO aircraft and command elements have deployed to bases on the new members’ territory and operated
jointly with their air forces in exercises. As part of the NATO integration process and PfP cooperation, the individual MAP states have taken steps during the past few years to upgrade selected airfields to full NATO standards. Gradually, most of the operational airfields in these countries will meet all NATO flight safety requirements.

In a process that dates back to 1992, the United States has assisted all the new NATO member and MAP countries in setting up a NATO-compatible network of air sovereignty, early warning, and air traffic control centers (ASOCs). By late 2000, the ASOCs in all the MAP states either were operational or were to become operational shortly. Modernization of the system on a regional basis will ease these countries’ integration into NATO’s integrated air defense system if and when they become members, and will allow for safe operations in their airspace.

Finally, many new and potential members have made training areas available for NATO aircraft. Given the restrictions in most of NATO Europe on aerial training (and especially on low-altitude training), access to new training grounds nearby amounts to a significant asset. Moreover, urban sprawl and the consequent public pressure to restrict aerial training areas have not progressed in most of the MAP countries to anywhere near the levels of western Europe. The regular deployment of USAF combat aircraft to the Kuchyna-Malacky base in Slovakia has provided USAF training benefits (while also serving a shaping function with regard to Slovakia).

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14 For example, already in 1997, the United States deployed F-16s and F-15s to Powidz, Poland, for several days of U.S.-Polish exercises. Elements of USAFE’s deployable air operations center were set up in Poland in support of combined assets from USAFE, U.S. Air National Guard, and the Polish Air Force.

15 The initiative began modestly in 1992, with a U.S. effort to assist then Czechoslovakia, Poland, and Hungary in creating joint civil-military air traffic control systems. In 1994, it expanded to a major U.S. assistance program, the Regional Airspace Initiative (RAI), and within a few years was enlarged to cover most of the former communist countries in central Europe. By 1998, the RAI had developed to the point of creating a modern regional system of airspace management compatible with NATO’s integrated air defense system and included 13 countries: Poland, the Czech Republic, Hungary, Slovakia, Austria, Slovenia, Romania, Bulgaria, Albania, Macedonia, Lithuania, Latvia, and Estonia. Although the ASOCs included in the program contain U.S. surveillance equipment (FPS-117 radars), indigenous designs have been adapted to fit within the new system.
THE FORMER NEUTRALS

The group of former European neutrals that potentially could seek admission to NATO in the next 10 to 15 years would face processes of adjustment different from those of the former communist states. NATO has less influence over the force plans of these countries, which already have a virtual NATO membership through their EU affiliation and do not perceive themselves as depending directly on NATO to safeguard their long-term security. The air assets of these countries—Austria, Sweden, and Finland—are relatively easy to integrate into NATO (Finland, with some ex-Soviet equipment, is a partial exception), and their training is comparable to that of current NATO members. In addition, they bring with them access to training grounds (in northern Sweden and Finland) that allow extended low-altitude operations, and NATO air forces already use regularly the northern Swedish training areas. The quality of their infrastructure is also comparable to that of current NATO members, and they are all affluent, able to afford the changes necessary to be effective NATO members.

For these countries, the top shaping priority is to enable their air forces to participate in at least some of NATO’s air operations, which would entail preparing deployable air assets and making doctrinal and training changes as necessary to fit into NATO operations. For example, if a Swedish air component were to operate from a non-Swedish airbase as part of a NATO operation, it would have to be logistically compatible with the NATO forces, sustainable outside its home base, and operated by personnel familiar with and proficient in all NATO procedures pertaining to flight operations. Another priority would be to preserve the capabilities of these air forces if the countries did indeed become NATO members. Sweden and to a lesser extent Finland might be tempted to reduce the level of resources they devote to defense, and air forces specifically, if their security were guaranteed within the NATO framework. However, the means available to NATO for influencing these three countries to adjust their air forces for NATO operations are limited. Consequently, the three are not bound by any mechanisms to adjust to NATO’s

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16The term neutral has lost its meaning in the post–Cold War world; the more accurate term, and one preferred by the former neutrals, is non-aligned.
wishes and, if they choose to do so, may retain air forces suited only to national needs.

FINAL CONSIDERATIONS

If one accepts the rationale behind NATO’s transformation and enlargement, the fact that the MAP states’ potential military contribution to NATO will remain low for the foreseeable future represents neither a major problem nor a shortcoming in relation to the political goal of re-unifying Europe and erasing the damage done by communism—and doing so on terms established by NATO and the EU. Nor is a low contribution all that unusual within NATO. Two long-standing NATO members contribute little (Luxembourg) or nothing (Iceland) in terms of military forces. Other members, such as Portugal, are not major political and military actors within NATO. The contribution of the MAP states is designated as low only when seen in an absolute sense. In relative terms, such as the defense effort and the ratio of troops assigned to NATO as a percentage of population, the MAP states have incentives to contribute forces at or above the median NATO level, because of their perceived insecurity and their need to make themselves valuable to NATO.

The important goal, and one where the shaping strategy comes into play, is to ensure that the MAP states use their scarce defense resources wisely and contribute in an optimal fashion to NATO. Recommendations for strategies are discussed at greater length in Chapter Six.

The problems associated with integrating the militaries of new members are neither insurmountable nor unexpected. NATO has added members several times previously, and each time the process typically has taken many years. Integration difficulties stem from NATO’s having existed for five decades and its consequent institutionalization (and the ever-increasing number of NATO Standardization Agreements, or STANAGs), the increasing technological complexity of NATO’s equipment and weapons, and the relative divergence of new members from NATO’s norms. It took years for the West German armed forces to become integrated into NATO after Germany joined NATO. And the integration of the East German armed forces into unified German forces and a part of NATO seemed such a difficult task that it was not even attempted, and the East
German military (NVA) was in effect disbanded. Ten years after German unification, only a fraction of the former professional NVA soldiers remained in the German armed forces, and most former NVA equipment had been scrapped or exported.

Unified Germany had the luxury of not needing to integrate the East German forces (indeed, for reasons of ensuring unification on West German terms, Germany had every reason to retain as few former NVA soldiers as possible), but the other former communist states in Europe that have joined or are on track to joining NATO have not had the same luxury. These countries have had to transform their militaries into institutions supportive of and capable of functioning in the new democratic environment while radically reducing their armed forces’ resources and manpower. And they have had to do so while simultaneously attempting to retain their basic defense capabilities and become an integrated part of a military alliance with its own mode of operation. Those former communist countries that attained sovereignty in the early 1990s also faced other problems, since they had to set up their armed forces either from scratch or from predecessor-state forces. In both cases, the sheer magnitude of the change has no easy parallels.


\[^{18}\]In 1998, there were 4,797 former NVA soldiers serving in the Bundeswehr, of which 1,343 were officers and the rest NCOs. The NVA comprised 100,000 to 120,000 soldiers in 1989–90. (Data for 1998 are from Dale R. Herspring, "From the NVA to the Bundeswehr: Bringing the East Germans into NATO," in Andrew A. Michta, *America’s New Allies: Poland, Hungary, and the Czech Republic in NATO*, Seattle and London: University of Washington Press, 1999, p. 34.)


\[^{20}\]German unification is not a good parallel, since it amounted to the disbanding of the NVA. The evolution of the Finnish defense establishment in the 1990s offers some insights on what a country that was formerly a heavy user of Soviet equipment can
After a decade of military reform, the integration problems faced by the three new members and the MAP countries have been scrutinized in great detail. Whether it comes to training, equipment, or, perhaps more important than all, the human dimension, there is already voluminous literature on the existing problems and the remedies needed. But the overwhelming nature of the task and the novelty of some of the problems mean that putting together an effective strategy for transformation of the MAP militaries is not easy. This is where NATO’s shaping incentives come into play and can have a major influence, as discussed in the next chapter.

accomplish. With proper planning and affluent conditions (and the resulting relative availability of resources), the Finnish defense establishment implemented a shift away from its position as a Cold War-era “neutral” highly sensitive to Soviet concerns to a country integrated into the EU and the larger EU/NATO defense community. The extent of the shift within the Finnish defense establishment is especially striking in view of the data coming out of the post–Cold War opening of the archives, which show that Finland’s status during the Cold War was akin to that of a semi-satellite of the USSR. For example, on Soviet influence over the Finnish media, see Esko Salminen, The Silenced Media: The Propaganda War Between Russia and the West in Northern Europe, New York: St. Martin’s Press, 1999.

21David Glantz’s study of the training and educational problems facing the Polish, Czech, and Hungarian militaries and suggestions for addressing them is probably the most comprehensive so far. Its recommendations have much relevance for the MAP countries. The Glantz study was reprinted in three parts in The Journal of Slavic Military Studies: “Military Training and Education Challenges in Poland, the Czech Republic, and Hungary,” 11:3, September 1998, pp. 1–55 (part 1); “The Accomplishments, Strengths and Weaknesses of the U.S. Military (Security) Assistance Program,” 11:4, December 1998, pp. 1–71 (part 2); “Military Training and Educational Challenges in Poland, the Czech Republic and Hungary; Conclusions and Recommendations,” 12:1, March 1999, pp. 1–12 (part 3). Other good studies or analyses include Christina M. Patterson, David R. Markov, and Karen J. Richter, Western-Style Armaments for New NATO Countries, Institute for Defense Analyses, P–3450, June 1999; Brigadier-General Michael H. Clemmesen, “Integration of New Alliance Members: The Intellectual-Cultural Dimension,” Defense Analysis, 15:3, 1999, pp. 261–272. For suggestions concerning a policy on the sale of arms to the former communist countries, see Dov S. Zakheim, “Rationalizing and Coordinating the Sale of Conventional Armaments in Central and Eastern Europe,” International Politics, 34, September 1997, pp. 303–326. New member and MAP militaries also have examined nearly every imaginable aspect of military integration into NATO. The professional military press, especially the Polish Mysl Wojskova and the Czech Vojenske Rozhledy, has published many assessments along these lines.