



No-Fly Zones: Strategic, Operational, and Legal Considerations for Congress

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Summary

In conflicts in Kosovo, Iraq, and Libya, the United States has taken part in establishing and maintaining no-fly zones. As no-fly zones represent a significant commitment of U.S. forces, and may prove a precursor to other military actions, Congress may wish to consider issues surrounding the strategy, international authorization, congressional authorization, operations, and costs of establishing and maintaining no-fly zones.

The military strategy designed to support U.S. grand strategy, it has been suggested, might be based on these considerations: the operational-level military objectives that need to be achieved, to support the overall grand strategy; and the extent to which a no-fly zone—as one set of ways and means—helps achieve those objectives.

Practitioners and observers have debated what constitutes international “authorization” for the establishment of a no-fly zone. Given the paucity of relevant precedents, and the dissimilarities among them, there may not exist a single, clear, agreed model. The concept of authorization is typically considered to be linked to the ideas of both “legality” and “legitimacy”—the three concepts overlap but are all distinct. The precise meaning of each of the terms is still debated. Express authorization from the U.N. Security Council provides the clearest legal basis for imposing a no-fly zone.

In addition to international authorization, debates have addressed the question of congressional authorization—whether and when there is a need for congressional approval based on the War Powers Resolution for a proposed no-fly zone. The question of whether and how congressional authorization is sought for a proposed operation could have an impact on congressional support—including policy, funding, and outreach to the American people—for the operation. Since the War Powers Resolution gives the President the authority to launch U.S. military actions prior to receiving an authorization from Congress for 60-90 days, it is possible that the President could direct U.S. Armed Forces to take or support military actions in accordance with U.N. Security Council resolutions, or in support of NATO operations, and then seek statutory authority for such actions from Congress.

No-fly zone operations can conceivably take a number of different forms, and can themselves vary a great deal over time. Key considerations include, but are not limited to, the following factors: the nature, density, quantity, and quality of adversary air assets; geography; the availability of “friendly” assets; the adversary’s military capabilities and responses; the U.S. military’s concept of operations; and the rules of engagement.

The costs of establishing and maintaining a no-fly zone are likely to vary widely based on several key parameters. They could be the specific military tasks that a given no-fly zone operation calls for, the geography of the adversary’s country, the duration of the no-fly zone, the extent to which the United States is joined by international partners in the effort, and the extent of “mission creep”—how, if at all, the operation expands to include a broader array of activities designed to achieve the same military, and strategic, objectives.

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Strategy¹

Many diplomatic and military practitioners as well as theorists have argued that successful execution of a military operation depends on the how well specific actions are matched to strategic intent.²

Grand Strategy

It has been argued that the imposition of any no-fly zone, a particular form of military operation, should begin with a clear articulation of strategic-level goals. For any given situation, such “grand strategy” might include, in this order:

- a clear statement of the U.S. national interests at stake;
- a vision of the political endstate—the strategic-level outcomes—that would help secure those interests;
- a clear articulation of the major steps—the ways and means—including diplomatic, political, and economic as well as military, to be employed in order to accomplish the desired endstate, including the objectives each is designed to achieve; and
- a consideration of the nature and extent of political “risk” in the proposed approach—including the potential impact of proposed actions on the civilian population in the targeted country, on the region, on broader international partnerships, and on perceptions of the U.S. government both at home and abroad.

Military Strategy

The military strategy designed to support the grand strategy, it has been suggested, might be based on these considerations:

- the operational-level military objectives that need to be achieved, to support the overall grand strategy, and
- the extent to which a no-fly zone—as one set of ways and means—helps achieve those objectives. Recent operational experiences suggest that the establishment of a no-fly zone, in itself, is unlikely to achieve the full set of military objectives, such as protecting a civilian population, let alone the grand strategic objectives, such as restoring or removing a regime.

¹ This section was prepared by Catherine Dale, Specialist in International Security, and Jeremiah Gertler, Specialist in Military Aviation.

² Prussian writer Carl von Clausewitz argued, “No one starts a war, or rather, no one in his senses ought to do so, without first being clear in his mind what he intends to achieve by that war and how he intends to conduct it.” See Carl von Clausewitz, *On War*, translated by Michael Howard and Peter Paret, Princeton, NJ: Princeton University Press, 1976.

Recent Cases

In key recent “no-fly zone” cases, observers suggest that the strategic planning process may have emphasized “mid-range” operational-level concerns at the expense of higher-level strategic concerns. In Operation Odyssey Dawn, Operation Northern Watch, Operation Southern Watch, and Operation Deny Flight, the match between the application of one military approach—the no-fly zone—and broad strategic goals, many assess was at best incomplete.³

Operation Odyssey Dawn, a coalition operation conducted during early 2011 over Libya, was put in place to enforce United Nations Security Council Resolution 1973, which authorized force to protect civilians in Libya. Facing a popular uprising, the Libyan government under Muammar al Qadhafi had responded with attacks against population centers with armor, artillery, and air strikes. Going beyond a pure no-fly zone, Operation Odyssey Dawn prevented Libyan air forces from operating against civilians, while including attacks against pro-Qadhafi ground forces that were perceived to be threatening civilian populations. Although Odyssey Dawn included establishment and enforcement of a no-fly zone, it also included strike operations against Libyan government forces perceived to be attacking civilian populations, and the command and control and logistics networks supporting those forces. More information on Operation Odyssey Dawn can be found in CRS Report R41725, *Operation Odyssey Dawn (Libya): Background and Issues for Congress*.

Operation Northern Watch (ONW), a combined operation involving U.S., UK, and French forces conducted from 1991 to 2003, was designed to enforce a no-fly zone in northern Iraq, north of the 36th parallel, in order to prevent Iraqi repression of the concentrated ethnic Kurdish population living in that part of the country.⁴ The Iraqi government led by Saddam Hussein had already made use of Iraqi airspace to attack Iraqi Kurds in Halabja with chemical weapons in 1988. Acts of repression after the conclusion of the early 1991 Gulf War had displaced many Iraqi Kurds. The immediate aim of ONW was to protect the population from further attacks by the Iraqi military, and it is generally considered that ONW largely achieved this operational objective. At the strategic level, ONW took place against the backdrop of international pressure on the Iraqi government to comply with an international weapons inspection regime, in accordance with U.N. Security Council resolutions. Missing from ONW, in any explicit way, was a vision of political endstate, or a stated theory of the case linking the no-fly zone to that endstate.

Similarly, Operation Southern Watch (OSW), a U.S.-led coalition operation, was designed to protect the Shi’a Arab population of southern Iraq from repression and retaliation by Iraqi government forces in the wake of the Gulf War. The Iraqi government had made use of its own airspace to conduct bombing and strafing runs targeting Shiite citizens. In terms of immediate operational objectives, OSW is generally considered not to have prevented Iraqi government repression of its southern population. At the strategic level, while some U.S. officials had reportedly considered, at one time, that in the wake of the Gulf War southern Iraqi Shiites might rise up to demand the ouster of Saddam’s regime, OSW does not appear to have been guided by any explicit vision of political endstate.

³ For assessments of these cases, see Joshua Keating, “Do No-Fly Zones Work?” *Foreign Policy*, February 28, 2011; and Alexander Benard, “Lessons from Iraq and Bosnia on the Theory and Practice of No-Fly Zones,” *The Journal of Strategic Studies* Vol.27, No.3, September 2004, pp.454-478.

⁴ The mission was originally called Operation Provide Comfort; the name Operation Northern Watch was adopted in 1997.

Operation Deny Flight (ODF) was a NATO operation that banned all flights—with some exceptions—in the airspace of Bosnia and Herzegovina from April 1993 to December 1995. The military objectives included denying the use of that airspace to Bosnian Serb aircraft, in order to protect the population and facilitate the delivery of humanitarian assistance. Observers have debated the ODF’s degree of success in this regard—while humanitarian work by international relief organizations was protected to some extent, Bosnian Serb aircraft periodically defied the flight ban to stage attacks, while on the ground, for example, Bosnian Serb forces overran the U.N. safe haven in Srebrenica, in 1995, killing thousands. At the strategic level, ODF may have come closer than the no-fly zone operations in Iraq to linkage with strategic objectives. In the preamble of the 1992 U.N. Security Council resolution authorizing ODF’s precursor, a no-fly zone banning military aircraft, the Council “consider[ed] that the establishment of a ban on military flights in the airspace of Bosnia and Herzegovina constitutes an essential element for the safety of the delivery of humanitarian assistance and a decisive step for the cessation of hostilities in Bosnia and Herzegovina.”⁵ Some experts believe that the Bosnian no-fly zone contributed directly to the ultimate cessation of hostilities; others suggest that its contribution is difficult to separate from the roles of close air support and the ground presence of U.N. troops. There is little evidence to suggest that a clear and specific vision of the political endstate that might follow a cessation of hostilities informed the creation of the no-fly zone.

International Authorization

Practitioners and observers have debated what constitutes international “authorization” for the establishment of a no-fly zone. Given the paucity of relevant precedents, and the dissimilarities among them, there may not exist a single, clear, agreed model.

Authorization may be not only a question of approval or disapproval. It may also include

- parameters for the execution of the mission, and
- conditions under which the authorization for the no-fly zone operation will be considered discontinued. It may not be necessary to achieve all of the broad objectives of grand strategy before discontinuing the no-fly zone—the no-fly zone operation may be designed to catalyze overall progress toward those objectives.

In turn, the concept of authorization is typically considered to be linked to the ideas of both “legality” and “legitimacy”—the three concepts overlap but are all distinct. The precise meaning of each of the terms is still debated.

Law⁶

The legality of a no-fly zone operation may depend, at a minimum, on both authorization for the operation and the extent to which the manner of execution of the operation comports with relevant international law.

⁵ U.N. Security Council Resolution 781 (1992), October 9, 1992.

⁶ This section was prepared by Jennifer Elsea, Legislative Attorney.

The Charter of the United Nations, in Article 2(4), prohibits the “threat or use of force against the territorial integrity or political independence” of a member state under most circumstances, and many practitioners and observers have wondered whether the establishment of a no-fly zone would constitute a violation of this prohibition.⁷ In practice, the answer may depend on the circumstances—and in some cases there may be no general agreement about what the empirical circumstances indicate. There are at least three sets of circumstances that do—or may—constitute exceptions to this prohibition.

The first basis for an exception is U.N. Security Council authorization based on the powers granted to the Council by Chapter VII of the U.N. Charter to respond to threats to international peace and security. That Chapter authorizes the Security Council to “determine the existence of any threat to the peace, breach of the peace, or act of aggression” and to “make recommendations, or decide what measures shall be taken ... to maintain or restore international peace and security.” Express authorization from the Security Council provides the clearest legal basis for imposing a no-fly zone.

The second basis for an exception is self-defense. Article 51 of the Charter explicitly recognizes the right of self-defense as an exception to the prohibition. The Article states, “Nothing in the present Charter shall impair the inherent right of individual or collective self-defense if an armed attack occurs against a Member of the United Nations.”

Some theorists and practitioners consider that there also exists a customary doctrine of self-defense outside of the U.N. Charter that permits military action to prevent a grave threat to regional peace and stability, even if that threat seems to be contained within the borders of a state. According to this view, armed intervention within a state is not a prohibited “use of force” so long as it is not aimed at taking a state’s territory or subjecting its people to political control (a narrow reading of “use of force against the territorial integrity or political independence of any State”), and is not otherwise inconsistent with the intent of the U.N. Charter. If this reading is correct, then customary measures of self-help involving the use of force but falling short of war—reprisals, embargoes, boycotts, temporary occupations of foreign territory, pacific blockades, and similar measures—are not precluded by the U.N. Charter, but are acceptable means of customary self-defense preserved by Article 51. Others contend, however, that the Article 51 limitation supersedes what had been customary international law in these matters, and that the established practice of use of force by states in response to provocations other than armed attacks does not establish valid precedent, but rather, violates the Charter.

Third, some have argued that emerging international human rights law provides that states are no longer free to treat their people as they see fit under the guise of sovereignty, but are instead obligated to respect their people’s fundamental human rights. When a government engages in widespread abuse of the human rights of its own people, it has been asserted, that government loses a measure of its sovereignty. Other states, the argument continues, have the right or even the responsibility to intervene in order to put a stop to crimes against humanity, as an extension of the customary right of self-defense or the defense of others. This emerging doctrine of humanitarian intervention—sometimes described as the “responsibility to protect”—is not yet fully developed in international law, and there is no consensus about its application, including whether it

⁷ The U.N. Charter, 59 Stat. 1031, states in its preamble that one of its purposes to be “to save succeeding generations from the scourge of war,” and in Article 2(4) it requires its Members “to refrain from the threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the Purposes of the United Nations.”

constitutes an exception to the prohibition on the “threat or use of force.” Some believe that only the U.N. Security Council has the authority to invoke this doctrine.

The question of international authorization has direct implications, in turn, for the state in which a no-fly zone is imposed. If a no-fly zone is imposed against a state that has not carried out an armed attack against another state, in the absence of U.N. authorization based on Chapter VII of the U.N. Charter, and depending on the form the no-fly zone operation takes, that state might be entitled to consider the imposition of the no-fly zone itself an “armed attack.” Even if the no-fly zone operations in a given state do not constitute an “armed attack”—which in itself may be a subjective judgment—that state, and other members of the international community, might consider them a violation of the prohibition of the “threat or use of force,” as well as of the customary duty of non-intervention in the affairs of other sovereign states. The state targeted by the no-fly zone might, on that basis, choose to respond with military force or to seek assistance from its allies or partners to assist in its self-defense.

Legitimacy

While the legitimacy of any no-fly zone operation may draw on both authorization and legality, legitimacy is by definition a subjective question of perception—by the people of the host nation, by the U.S. population, and by other members of the international community. Issues to consider may include

- how the nature and extent of international authorization is likely to shape the perceived legitimacy of the no-fly zone operation;
- how the conduct of the operation is likely to shape that perceived legitimacy;
- the extent to which that perception of legitimacy, in turn, is likely to shape the support of members of the international community for the effort—ranging from political support, to the provision of basing, access, and overflight privileges, to full participation; and
- the extent to which perceived legitimacy is likely to affect the international community’s broader perceptions of, and support for, other concurrent or future U.S. initiatives.

Recent Cases

The most germane recent no-fly zone cases do not establish a clear model for securing international authorization—they differ from one another, and in some instances they have spurred debate rather than consensus about what constitutes appropriate authorization.

Both Operation Northern Watch (ONW) and Operation Southern Watch (OSW) were established in the wake of the early 1991 Gulf War in order to protect civilian populations of Iraq—ethnic Kurds living in northern Iraq, and Shi’a Arabs living in southern Iraq, respectively—from repression by the Iraqi government and its forces. In April 1991, in U.N. Security Council Resolution 688 (1991), the Council “condemn[ed] the repression of the Iraqi civilian population ... the consequences of which threaten international peace and security in the region.” While that resolution strongly encouraged humanitarian action and urged member states to support it, it

made no mention of military action.⁸ The previous November, the Council had laid the groundwork for military action in Iraq—the authorization for Gulf War operations—in U.N. Security Council Resolution 678 (1990), which invoked Chapter VII of the U.N. Charter. The resolution demanded that Iraq comply with previous resolutions, gave Iraq “one final opportunity” to do so, and—failing Iraqi compliance—“authorize[d] Member States ... to use all necessary means to uphold and implement [past Resolutions] and to restore international peace and security in the area.”⁹ Experts and practitioners have since hotly debated the applicability of the November 1990 blanket authorization to “use all necessary means” to the two operations that followed the Gulf War proper.

Operation Deny Flight, designed to protect the civilian population of Bosnia and Herzegovina, was based on a clear-cut U.N. mandate, although there may be less consensus about the basis for its precursor operation. In October 1992, in U.N. Security Council Resolution 781 (1992), the Council established a “ban on military flights in the airspace of Bosnia and Herzegovina,” primarily on humanitarian grounds, to help ensure the safe delivery of humanitarian assistance.¹⁰ Following repeated violations of that ban, in March 1993 the Council invoked Chapter VII of the Charter, extended the ban, and “authorize[d] Member States ... acting nationally or through regional organizations or arrangements, to take ... all necessary measures in the airspace of the Republic of Bosnia and Herzegovina, in the event of further violations, to ensure compliance with the ban on flights.”¹¹

Congressional Authorization¹²

In addition to international authorization, debates have addressed the question of congressional authorization—whether and when there is a need for congressional approval based on the War Powers Resolution for a proposed no-fly zone. The question of whether and how congressional authorization is sought for a proposed operation could have an impact on congressional support—including policy, funding, and outreach to the American people—for the operation.

On November 7, 1973, Congress passed the War Powers Resolution, P.L. 93-148, over the veto of President Nixon. The War Powers Resolution (WPR) states that the President’s powers as Commander in Chief to introduce U.S. forces into hostilities or imminent hostilities can only be exercised pursuant to (1) a declaration of war; (2) specific statutory authorization; or (3) a national emergency created by an attack on the United States or its forces. It requires the President in every possible instance to consult with Congress before introducing American Armed Forces into hostilities or imminent hostilities unless there has been a declaration of war or other specific congressional authorization. It also requires the President to report to Congress any introduction of forces into hostilities or imminent hostilities, Section 4(a)(1); into foreign territory while equipped for combat, Section 4(a)(2); or in numbers which substantially enlarge U.S. forces equipped for combat already in a foreign nation, Section 4(a)(3). Once a report is submitted “or required to be submitted” under Section 4(a)(1), Congress must authorize the use of force within

⁸ U.N. Security Council Resolution 688 (1991), April 5, 1991.

⁹ U.N. Security Council Resolution 678 (1990), November 29, 1990.

¹⁰ U.N. Security Council Resolution 781 (1992), October 9, 1992.

¹¹ U.N. Security Council Resolution 816 (1993), March 31, 1993.

¹² This section was initially prepared by Richard Grimmett, then Specialist in International Security.

60 to 90 days or the forces must be withdrawn. Since the War Powers Resolution's enactment in 1973, every President has taken the position that this statute is an unconstitutional infringement by Congress on the President's authority as Commander in Chief. The courts have not directly addressed this question, even though lawsuits have been filed relating to the War Powers Resolution and its constitutionality.

Some recent operations—in particular U.S. participation in North Atlantic Treaty Organization (NATO) military operations in Kosovo, and in U.N.-authorized operations in Bosnia and Herzegovina, in the 1990s—have raised questions concerning whether NATO operations and/or U.N.-authorized operations are exempt from the requirements of the War Powers Resolution.

Regarding NATO operations, Article 11 of the North Atlantic Treaty states that its provisions are to be carried out by the parties “in accordance with their respective constitutional processes,” implying that NATO Treaty commitments do not override U.S. constitutional provisions regarding the role of Congress in determining the extent of U.S. participation in NATO missions. Section 8(a) of the War Powers Resolution states specifically that authority to introduce U.S. forces into hostilities is not to be inferred from any treaty, ratified before or after 1973, unless implementing legislation specifically authorizes such introduction and says it is intended to constitute an authorization within the meaning of the War Powers Resolution.

Regarding U.N.-authorized operations, for “Chapter VII” operations, undertaken in accordance with Articles 42 and 43 of the U.N. Charter, Section 6 of the U.N. Participation Act, P.L. 79-264, as amended, authorizes the President to negotiate special agreements with the U.N. Security Council, subject to the approval of Congress, providing for the numbers and types of armed forces and facilities to be made available to the Security Council. Once the agreements have been concluded, the law states, further congressional authorization is not necessary. To date, no such agreements have been concluded.

Given these provisions of U.S. law, and the history of disagreements between the President and the Congress over presidential authority to introduce U.S. military personnel into hostilities in the absence of prior congressional authorization for such actions, it seems likely that a presidential effort to establish a “no-fly zone” on his own authority would be controversial. Controversy would be all the more likely if the President were to undertake action “pre-emptively” or in the absence of a direct military threat to the United States.

Since the War Powers Resolution gives the President the authority to launch U.S. military actions prior to receiving an authorization from Congress for 60-90 days, it is possible that the President could direct U.S. Armed Forces to take or support military actions in accordance with U.N. Security Council Resolutions, or in support of NATO operations, and then seek statutory authority for such actions from Congress.

Operations¹³

No-fly zone operations can conceivably take a number of different forms, and can themselves vary a great deal over time. Key considerations include, but are not limited to, the following factors.

¹³ This section was prepared by Jeremiah Gertler, Specialist in Military Aviation.

The Situation

The Nature and Density of Adversary Air Defenses

The sophistication of air defenses varies widely around the world, from individual, poorly-coordinated anti-aircraft guns to integrated air defense networks coupled with high-performance surface-to-air missile systems and modern fighter aircraft. The characteristics of a given air defense system will indicate whether establishing a no-fly zone requires that the defenses be destroyed, suppressed (by jamming, network attack, or other means), or merely bypassed. It will also dictate in part the tactics required for the initial suppression of enemy air defenses—for example, whether it can best be done by manned aircraft, standoff weapons such as cruise missiles, and/or remotely-piloted aircraft (also known as unmanned aerial vehicles or “UAVs”).

The Quantity and Quality of Adversary Air Assets

The size of the air component to be suppressed—not only the number of aircraft, but also bases—also informs the capabilities that the U.S. and partner forces would have to bring to bear. The quality of the air assets—particularly the quality and training of fighter forces, and the effectiveness of their command and control system—affects the amount of defensive assets that would have to be included in the no-fly zone force package, as well as the balance of efforts dedicated to offensive action against the enemy, and to defensive action to enhance the survival of “friendly” forces.

Geography

The geographical boundaries of a no-fly zone help define both the relevant assets and the level of suppression of enemy air defenses (SEAD) required. For example, a no-fly zone focused on coastal areas could allow “friendly” naval air assets to engage more readily, and may not require the same level of SEAD as a no-fly zone that requires tactical aircraft (and especially supporting assets like tankers) to penetrate deeply into the defended airspace. Similarly, a no-fly zone that denies flight only over major urban areas, for example, reduces the resource requirements for the no-fly zone compared to denial of air activity over a whole country, as in Bosnia and Herzegovina; or major areas of a country, as in northern and southern Iraq. The proximity of allied and partner states can affect the availability of basing for land-based tactical aircraft and UAVs—the negotiation of new agreements regarding basing, access, and overflight, if required, can take time. The proximity of oceans, in turn, can provide navigable waters for carrier-based aircraft and/or cruise missile-equipped ships.

Availability of “Friendly” Assets

Plans for resourcing a no-fly zone may be shaped by concurrent or potential competing demands, in particular for “high-demand, low-density” assets such as intelligence, surveillance, and reconnaissance (ISR). For example, U.S. ISR assets supporting the war effort in Afghanistan have been increased substantially, in part by drawing some assets away from Iraq; but the demand continues to grow.

The participation of allies and partners can reduce the demands on U.S. forces for some capabilities—for example, strike—but depending on the scenario, the capabilities of partners in

areas such as surveillance, and command and control, may not be sufficiently robust to provide equivalent effectiveness.

The Adversary

The Adversary's Strategy and Tactics

Strategists generally argue that an understanding of the adversary's strategy and likely tactics should help inform the operational-level objectives of a no-fly zone operation. That understanding may be based in part on precedent—for example, the Iraqi government's use of chemical weapons against its own northern Kurdish population in 1988, and its use of fixed-wing and rotary-wing aircraft to strafe the population in southern Iraq after the Gulf War. That understanding may also be informed by current intelligence based on input from a variety of possible platforms and assets. If the adversary uses a large fixed-wing transport fleet to move troops around the country, or if it has a large concentration of fighter aircraft near a border with an ally or partner in the region and a track record of some hostility with that state, these factors may shape the priorities of the no-fly zone operations.

The Adversary's Responses

Operational planning for a no-fly zone is likely to consider the adversary's most likely and most dangerous responses to the operation. Expectations—and intelligence—concerning possible adversary responses may shape the planned conduct of the operation, including the scope and scale of capabilities brought to bear.

Concept of Operations

If denying the adversary's fixed-wing operations is sufficient to achieve the desired operational- and strategic-level effects, "air caps" can be maintained over the adversary's air bases, or standoff weapons can be used to render runways unusable, with minimal risk of civilian casualties or other loss. Minimizing the force used—for example, choosing not to destroy aircraft on the ground, hangars, or other support facilities—may allow a more rapid return to operation after the conclusion of the no-fly zone effort; this may be an important consideration, depending on the desired overall political endstate.

If, on the other hand, the operational-level goals include denying adversary rotary-wing operations, a more significant no-fly zone operation would be necessary. Interdicting physical facilities—hangars, runways, ramp areas—has a much more limited effect on rotary-wing operations. Because helicopters are not tied to large bases, they are harder to locate when on the ground, requiring more assets to detect them and to monitor potential changes of location. Helicopters are also harder to detect than fixed-wing aircraft when airborne, particularly if the operators are skilled in using nap-of-the-earth flight and other techniques to minimize visibility to radar.

Destruction of rotary-wing assets in the air would typically require getting within closer range of the targets than for fixed-wing platforms. Helicopters are harder to hit as well as to detect. In a scenario requiring suppression of rotary-wing activity, merely suppressing coastal or local air

defenses would not be sufficient; since the helicopters could be almost anywhere in the adversary's territory, access to the adversary's full airspace would be necessary.

Rules of Engagement

Those imposing a no-fly zone operation may choose to limit it formally in scope, in the area of operation, in allowable weapons and tactics, or in other ways, in order to avoid civilian casualties or other loss, to incentivize defections by adversary forces, to restrict actions likely to alienate partners, or for other strategic considerations.

Costs¹⁴

The costs of establishing and maintaining a no-fly zone are likely to vary widely based on several key parameters:

- the specific military tasks that a given no-fly zone operation calls for. For example, initial costs might be relatively high if, as a first step, it were necessary to destroy the adversary's air defenses. A particularly robust surface-to-air capability, including a large number of discrete SAM sites, might prove relatively costly to suppress.
- the geography of the adversary's country—the surface area and type of terrain over which U.S. and partner forces would have to operate. A large surface area, as in ONW and OSW in Iraq, or mountainous terrain, as in ODF in Bosnia and Herzegovina, could both add cost, depending on the concept of operations for enforcing the no-fly zone.
- the duration of the no-fly zone.
- the extent to which the United States is joined by international partners in the effort.
- the extent of “mission creep”—how, if at all, the operation expands to include a broader array of activities designed to achieve the same military, and strategic, objectives.

As a rough guide to the range of possible costs, **Table 1** shows the costs to the U.S. government of U.S. participation in a variety of air operations in the 1990s. Of these, Operation Noble Anvil, the air war in Yugoslavia designed to address conflict in Kosovo, was the most intense. It involved initially limited and later extensive attacks to degrade air defenses throughout the Federal Republic of Yugoslavia, including all of Serbia. Those were followed by escalating air attacks initially focused on the military infrastructure and later on strategic targets. The operation lasted for two and a half months, from March 24 through June 10, 1999. The operation—including the no-fly zone and extensive additional activities—cost a total of \$1.8 billion.

Toward the other end of the spectrum are costs of the two no-fly zone coalition operations in Iraq. The costs to the U.S. government of Operation Southern Watch averaged somewhat more than \$700 million per year, although the amounts varied substantially from year to year. The OSW

¹⁴ This section was initially prepared by Stephen Daggett, then Specialist in Defense Policy and Budgets.

mission involved constant patrols over a relatively large geographic area, punctuated by occasional strikes against Iraqi air defense sites. It imposed a considerable burden on U.S. Air Force units, mainly because of the long duration of the operation—from 1992 to 2003.

Additional CRS Reports

CRS Report RL31133, *Declarations of War and Authorizations for the Use of Military Force: Historical Background and Legal Implications*, by Jennifer K. Elsea and Matthew C. Weed.

CRS Report RS20775, *Congressional Use of Funding Cutoffs Since 1970 Involving U.S. Military Forces and Overseas Deployments*, by Richard F. Grimmett.

CRS Report RS21311, *U.S. Use of Preemptive Military Force*, by Richard F. Grimmett.

CRS Report R41725, *Operation Odyssey Dawn (Libya): Background and Issues for Congress*, coordinated by Jeremiah Gertler

Table I. Costs of Selected U.S. Combat Air Operations, FY1993-FY2003

(amounts in millions of current year dollars)

	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003
Southwest Asia											
Provide Comfort/Northern Watch	325.0	101.5	116.6	91.8	138.2	88.9	93.1	136.0	156.4	143.7	138.7
Southern Watch/Air Expeditionary Force			715.9	333.0	468.4	576.3	597.3	1,497.2	933.2	755.4	678.0
Desert Fox (Air Strikes, Dec. 1998)									92.9		
Former Yugoslavia (Kosovo)											
Balkan Calm (Observer Mission, Pre-Air War)									34.6		
Eagle Eye (Air Verification, Oct. 1998-Mar. 1999)									20.3		
Noble Anvil (Air War)									1,775.7		

Source: CRS based on data provided by Department of Defense, Office of the Under Secretary of Defense Comptroller.

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