



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

**Jeremiah Gertler, Coordinator**  
Specialist in Military Aviation

**Christopher M. Blanchard**  
Acting Section Research Manager

**Stephen Daggett**  
Specialist in Defense Policy and Budgets

**Catherine Dale**  
Specialist in International Security

**Jennifer K. Elsea**  
Legislative Attorney

**Richard F. Grimmett**  
Specialist in International Security

March 18, 2011

Congressional Research Service

7-5700

[www.crs.gov](http://www.crs.gov)

R41701

## Summary

The ongoing uprising in Libya against the government of Muammar al Qadhafi has been the subject of ongoing domestic and international debate about potential international military intervention, including the proposed establishment of a no-fly zone over Libya. 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 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.

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 U.S. 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.

## Contents

Strategy .....	1
Grand Strategy .....	1
Military Strategy .....	1
Recent Cases.....	1
International Authorization.....	3
Law .....	3
Legitimacy.....	5
Recent Cases.....	5
Congressional Authorization .....	6
Operations .....	7
The Situation .....	7
The Nature and Density of Adversary Air Defenses .....	7
The Quantity and Quality of Adversary Air Assets.....	8
Geography .....	8
Availability of “Friendly” Assets .....	8
The Adversary.....	8
The Adversary’s Strategy and Tactics .....	8
The Adversary’s Responses .....	9
Concept of Operations.....	9
Rules of Engagement .....	9
Costs.....	10
The Case of Libya.....	10
Congressional Action .....	11
Administration Perspectives .....	12
International Steps Regarding No-Fly Zones .....	13
United Nations Authorization .....	13
Other Organizations and Governments .....	13
Operational Considerations .....	15
The Nature and Density of Adversary Air Defenses .....	15
The Quantity and Quality of Adversary Air Assets.....	15
Geography .....	16
Concept of Operations.....	16
Additional CRS Reports.....	17

## Tables

Table 1. Costs of Selected U.S. Combat Air Operations, FY1993-FY2003.....	18
---	----

## Contacts

Author Contact Information .....	19
----------------------------------	----

## Strategy

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.<sup>1</sup>

### 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.

### 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

---

<sup>1</sup> 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.

concerns. In Operation Northern Watch, Operation Southern Watch, and Operation Deny Flight, many assess that the match between the application of one military approach—the no-fly zone—and broad strategic goals was at best incomplete.<sup>2</sup>

Operation Northern Watch (ONW), a combined operation involving U.S., UK, and French forces conducted from 1991 to 2003 in Iraq, was designed to enforce a no-fly zone in northern Iraq, north of the 36<sup>th</sup> parallel, in order to prevent Iraqi repression of the concentrated ethnic Kurdish population living in that part of the country.<sup>3</sup> 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.

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.”<sup>4</sup> 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

---

<sup>2</sup> 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.

<sup>3</sup> The mission was originally called Operation Provide Comfort; the name Operation Northern Watch was adopted in 1997.

<sup>4</sup> U.N. Security Council Resolution 781 (1992), October 9, 1992.

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.

## **Law<sup>5</sup>**

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.

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.<sup>6</sup> 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.”

---

<sup>5</sup> This section was prepared by Jennifer Elsea, Legislative Attorney.

<sup>6</sup> 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.”

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 peoples’ 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 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.<sup>7</sup> 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.”<sup>8</sup> 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

---

<sup>7</sup> U.N. Security Council Resolution 688 (1991), April 5, 1991.

<sup>8</sup> U.N. Security Council Resolution 678 (1990), November 29, 1990.



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.<sup>9</sup> 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.”<sup>10</sup>

## **Congressional Authorization<sup>11</sup>**

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 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.

---

<sup>9</sup> U.N. Security Council Resolution 781 (1992), October 9, 1992.

<sup>10</sup> U.N. Security Council Resolution 816 (1993), March 31, 1993.

<sup>11</sup> This section was prepared by Richard Grimmett, Specialist in International Security.

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 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.

## **Operations<sup>12</sup>**

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 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. They 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”).

---

<sup>12</sup> This section was prepared by Jeremiah Gertler, Specialist in Military Aviation.

## **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.

## Costs<sup>13</sup>

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 U.S. 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 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.

## The Case of Libya<sup>14</sup>

The ongoing uprising in Libya against the government of Muammar al Qadhafi has been the subject of ongoing domestic and international debate about potential international military intervention, including the proposed establishment of a no-fly zone over Libya. On March 17, 2011, the United Nations Security Council adopted Resolution 1973, establishing a no-fly zone in Libyan airspace, authorizing robust enforcement measures for the arms embargo established by Resolution 1970, and authorizing member states “to take all necessary measures ... to protect

---

<sup>13</sup> This section was prepared by Stephen Daggett, Specialist in Defense Policy and Budgets.

<sup>14</sup> This section was prepared by Christopher Blanchard, Acting Section Research Manager.

civilians and civilian populated areas under threat of attack in the Libyan Arab Jamahiriya, including Benghazi, while excluding a foreign occupation force of any form on any part of Libyan territory.” For more information on the conflict in Libya, see CRS Report RL33142, *Libya: Unrest and U.S. Policy*, by Christopher M. Blanchard.

## **Congressional Action**

Some Members of Congress have made statements urging the imposition of a no-fly zone in the case of Libya’s uprising, while others have expressed doubt about the utility of such an operation or other military intervention and suggested that the Administration should seek congressional authorization for any use of U.S. Armed Forces with regard to the Libyan conflict.

- On March 15, 2011, Senator John McCain introduced S.Res. 102, which  

calls on the President... to recognize the Libyan Transitional National Council, based in Benghazi but representative of Libyan communities across the country, as the sole legitimate governing authority in Libya ... to take immediate steps to implement a “no-fly zone” in Libya with international support; and ... to develop and implement a comprehensive strategy to achieve the stated United States policy objective of Qaddafi leaving power.
- Also on March 15, 2011, Representative Ron Paul and seven co-sponsors introduced H.Con.Res. 31, which “expresses the sense of Congress that the President is required to obtain in advance specific statutory authorization for the use of United States Armed Forces in response to civil unrest in Libya.” The resolution specifically notes the possible imposition of a no-fly zone as one of the possible actions that inspired the legislation.
- Senator Richard Lugar released a statement on March 15 that read, “It is doubtful that U.S. interests would be served by imposing a no-fly zone over Libya. If the Obama Administration is contemplating this step, however, it should begin by seeking a declaration of war against Libya that would allow for a full Congressional debate on the issue.”
- On March 16, Senator John Kerry said,  

The international community cannot simply watch from the sidelines as this quest for democracy is met with violence. The Arab League’s call for a U.N. no-fly zone over Libya is an unprecedented signal that the old rules of impunity for autocratic leaders no longer stand. Time is running out for the Libyan people. The world needs to respond immediately to avert a humanitarian disaster. The Security Council should act now to heed the Arab League’s call. (see “International Steps Regarding No-Fly Zones” below)
- Debate within the Senate Foreign Relations Committee at a March 17 hearing on the Middle East revealed differences of opinion among committee members and between some Senators and the Administration with regard to the imperative to intervene; the likely benefits and drawbacks of intervention, including through the establishment of a no-fly zone; the need for congressional authorization for the use of U.S. military forces; and the likelihood that Al Qaeda or other violent Islamists could take advantage of the current situation or future unrest to threaten Libyan and international security.

## Administration Perspectives

President Obama has clearly stated that the United States believes that Muammar al Qadhafi and his government have lost legitimacy and that Qadhafi should relinquish power and leave the country. To date, the President and his Administration have taken a number of non-military policy steps to achieve that goal, including supporting U.N. Security Council Resolution 1970, which imposes an international arms embargo on Libya and imposes targeted financial and travel sanctions on Qadhafi, some of his family members, and prominent officials of his government.<sup>15</sup> Prior to the adoption of Resolution 1973, the President and U.S. officials emphasized that “all options” have remained under consideration during the current crisis. In testimony on March 17, Under Secretary of State William Burns indicated that the United States has not formally broken diplomatic relations with the Qadhafi government. Insofar as Resolution 1973 “demands the immediate establishment of a cease-fire,” it is unclear whether U.S. action in pursuit of its previously stated goal of securing an end to Qadhafi’s rule would be compatible with the authorizations set out in the new resolution.

Civilian defense officials and uniformed military officers have discussed the political and operational considerations that have shaped the Administration’s decision making process with regard to a possible no-fly zone:

- On March 10, 2011, Defense Secretary Gates said, “We are very mindful of opinion in the region, and that’s one of the reasons that one of the three central criteria with respect to any action requires strong regional support. I think that a number of [NATO] ministers made clear that we were—we wanted to put ourselves in a position to assist the Arab League, the African Union or the U.N. in this endeavor, and very sensitive to NATO being responsive to those organizations rather than taking an initiative on its own.”<sup>16</sup>
- On March 16, U.S. Ambassador to the United Nations Susan Rice indicated publicly for the first time that the Administration supported discussion by the Security Council of further international steps, including a no-fly zone, with regard to the conflict in Libya. She said, “we need to be prepared to contemplate steps that include, but perhaps [should] go beyond, a no-fly zone at this point, as the situation on the ground has evolved, and as a no-fly zone has inherent limitations in terms of protection of civilians at immediate risk.”<sup>17</sup>
- On March 17, 2011, Air Force Chief of Staff General Norton Schwartz “said it would take upwards of a week to establish a no-fly zone and would require U.S. forces to first neutralize Libyan ground to air anti-aircraft sites.”<sup>18</sup> General Schwartz added that a no-fly zone itself “would not be sufficient” to reverse recent Libyan government gains against the anti-Qadhafi forces.

---

<sup>15</sup> United Nations Security Council, SC/10187/Rev. 1, “In Swift, Decisive Action, Security Council Imposes Tough Measures on Libyan Regime, Adopting Resolution 1970 in Wake of Crackdown on Protesters,” February 26, 2011, <http://www.un.org/News/Press/docs/2011/sc10187.doc.htm>, accessed March 18, 2011.

<sup>16</sup> Thomas E. Ricks, “Gates lays out criteria for Libya action,” *ForeignPolicy.com/Best Defense blog*, March 10, 2011.

<sup>17</sup> Remarks by Ambassador Susan E. Rice, U.S. Permanent Representative to the United Nations, at the Security Council Stakeout on Libya, New York, NY, March 16, 2011.

<sup>18</sup> Frank Oliveri, “Top Officer Says ‘No-Fly’ Zone Over Libya Might Not Help Rebels,” *CQ Today Online*, March 17, 2011.

- On March 17, Ambassador Rice explained the U.S. vote in favor of Resolution 1973 by stating that the Security Council, “has responded to the Libyan people’s cry for help. This Council’s purpose is clear: to protect innocent civilians.”

## **International Steps Regarding No-Fly Zones**

### **United Nations Authorization**

United Nations Security Council Resolution 1970, adopted on February 26, 2011, did not authorize the use of force by member states with regard to the conflict in Libya or the enforcement of the arms embargo established by the resolution. As such, debate from February 26 through March 17 focused on the need for military intervention and the potential for further authorization from the Security Council.

On March 17, the United Nations Security Council adopted Resolution 1973, which, among other steps, demands an immediate ceasefire, establishes a no-fly zone in Libyan airspace, authorizes robust enforcement measures for the arms embargo established by Resolution 1970, and authorizes member states “to take all necessary measures ... to protect civilians and civilian populated areas under threat of attack in the Libyan Arab Jamahiriya, including Benghazi, while excluding a foreign occupation force of any form on any part of Libyan territory.”

The no-fly zone provisions of the resolution ban “all flights in the airspace of the Libyan Arab Jamahiriya in order to help protect civilians” with the exception of humanitarian flights, evacuation flights, flights authorized for the protection of civilians, and “other flights which are deemed necessary by States acting under the authorization ... to be for the benefit of the Libyan people.” Member states are authorized to act nationally or “through regional organizations.” All authorized flights are to be coordinated with the U.N. Secretary General and the Arab League Secretary General. The resolution calls on member states “to provide assistance, including any necessary over-flight approvals, for the purposes of implementing” the no-fly zone and civilian protection operations.

It was not clear what immediate steps the United States or others were prepared to take to enforce the no-fly zone or civilian protection provisions of resolution 1973, amid claims from Qadhafi and Libyan opposition figures that the confrontation in and around Benghazi could be reaching a decisive point. Libyan officials replied to the Security Council action by stating that, “Any foreign military act against Libya will expose all air and maritime traffic in the Mediterranean Sea to danger and civilian and military [facilities] will become targets of Libya’s counter-attack.”<sup>19</sup> Libya’s reported acceptance of ceasefire on the morning of March 18 may complicate the decisions of third parties, including the United States, about how to proceed with authorized intervention in general, and a no-fly zone in particular.

### **Other Organizations and Governments**

The adoption of the resolution by the Security Council followed a flurry of international activity and diplomacy addressing the subject of potential military intervention generally and a no-fly

---

<sup>19</sup> Reuters, “UN Security Council authorizes no-fly zone over Libya,” March 18, 2011.



zone specifically. On March 12, 2011, the Council of the League of Arab States met to discuss the situation in Libya and endorsed on a consensus basis a request to the U.N. Security Council:

to take measures to impose a no-fly zone over the movement of Libyan military planes immediately, and to establish safe areas in the places exposed to shelling as preventive measures allowing to provide protection for the Libyan people and the residents in Libya from different nationalities, taking into account the regional sovereignty and integrity of neighboring countries.<sup>20</sup>

The Arab League statement was welcomed by international observers who view regional support as a prerequisite for any direct intervention, including any multilateral military operation to impose a no-fly zone. The U.S. government referred to the decision as “important.” Other observers caution the apparent consensus at the Arab League meeting may mask underlying dissension among regional governments with regard to specific types of military intervention and strong opposition to any foreign military intervention among some regional citizens.<sup>21</sup> Some in the region strongly supported the Arab League statement and have expressed concern that third parties, including the United States, have not provided sufficient support to the Libyan opposition. Popular reactions to the new Security Council action in different countries vary, and popular views and government positions could shift dramatically depending on the scope, course, and outcome of any potential military intervention, including the imposition of a no-fly zone. Resolution 1973 recognizes “the important role of the League of Arab States in matters relating to the maintenance of international peace and security in the region,” and requests that the member states of the Arab League “cooperate with other Member States in the implementation of” measures taken pursuant to the resolution to protect Libyan civilians. The Obama Administration is seeking “active Arab partnership, both in the measures that would be taken but also in the financial support for them.”<sup>22</sup>

In recent weeks, the North Atlantic Treaty Organization (NATO) has been monitoring Libyan air traffic using AWACS aircraft and assets deployed as part of NATO’s Operation Active Endeavor, NATO’s long-standing counterterrorism and maritime security operation in the Mediterranean Sea. On March 7, NATO representatives agreed to increase air surveillance of Libyan air traffic to 24 hours per day. NATO Secretary General Anders Fogh Rasmussen stated, “as a defense alliance and a security organization, it is our job to conduct prudent planning for any eventuality.”<sup>23</sup> On March 10, NATO Defense Ministers convened for a previously planned ministerial meeting and discussed the situation in Libya. Following the meeting, NATO announced that it had decided to “increase the presence of NATO maritime assets in the Central Mediterranean,” and to begin planning for support of humanitarian operations and more active enforcement of the arms embargo, in anticipation of potential further U.N. Security Council instructions. Secretary

---

<sup>20</sup> OSC Report GMP20110314950010, “Arab League Urges U.N. to Impose No-Fly Zone Over Libya,” March 12, 2011.

<sup>21</sup> There are conflicting reports from unnamed Arab official sources that some governments opposed the decision. Algerian diplomats informed CRS that their government did not oppose the Arab League Council decision, contrary to some press reports. Algeria has urged coordination with the African Union, stressed that any no-fly zone decision must be taken by the U.N. Security Council, and maintains its general “opposition to any foreign intervention in Libya,” a position it maintained with regard to uprising in Tunisia and Egypt. Syria’s representative also is rumored to have expressed reservations about the decision and has warned of foreign intervention in Libya.

<sup>22</sup> Testimony of Under Secretary of State William Burns, before the Senate Foreign Relations Committee, March 17, 2011.

<sup>23</sup> European Commission, “The European Commission’s humanitarian response to the crisis in Libya,” Memo/11/143, March 4, 2011.

General Rasmussen stated that “demonstrable need, a clear legal mandate and solid support from the region,” would be the critical factors in determining the scope of further NATO action.

In spite of statements underscoring NATO unity on steps announced to date, there does not appear to be full consensus with the alliance about specific options, including military intervention in the form of a no-fly zone. German officials have rejected the use of NATO as a vehicle for organizing the imposition of a no-fly zone or other direct military intervention.<sup>24</sup> On March 17, German Foreign Minister Guido Westerwelle said, “we won’t take part in any military operation and I will not send German troops to Libya.” Turkish officials also have rejected military intervention. France and the United Kingdom have endorsed the imposition of a no-fly zone, and reports on the morning of March 18 suggested that the United Kingdom, France, and Spain were taking steps to prepare their military forces to immediately act to implement the provisions of Resolution 1973.

## **Operational Considerations**

Members of Congress may wish to apply a number of operational considerations that have informed past decisions about no-fly zone operations to the current Libyan case. As outlined above, these include:

### **The Nature and Density of Adversary Air Defenses**

General James Mattis, Commander, U.S. Central Command, has said:

You would have to remove the air defense capability, in order to establish the no-fly zone. So it—no illusions here, it would be a military operation. It wouldn’t simply be telling people not to fly airplanes.<sup>25</sup>

Libya’s air defense system relies on Soviet and Russian systems, most 20-30 years old and at least two generations behind current technology. Defenses are reportedly focused on Libya’s seacoast, which also covers the capital, Tripoli; Benghazi; and Libya’s major oil ports.<sup>26</sup> Although it is possible to observe the disposition of radars and missile sites, the condition and effectiveness of the communications, command and control network linking those sites is more difficult to determine.<sup>27</sup>

### **The Quantity and Quality of Adversary Air Assets**

Although Libya’s offensive air assets notionally include about 180 fighter and attack aircraft and just over 100 helicopters,<sup>28</sup> many or most are believed inoperable. The Chief of Staff of the U.S.

---

<sup>24</sup> Simon Tisdall, “Germany blocks plans for Libya no-fly zone,” *Guardian* (UK) March 15, 2011.

<sup>25</sup> Gen. James N. Mattis, commander, U.S. Central Command, in John Vandiver and Geoff Ziezulewicz, “No-fly zone over Libya: The facts,” *Stars & Stripes*, March 1, 2011.

<sup>26</sup> Sean O’Connor, “The Libyan SAM Network,” *IMINT & Analysis blog*, May 11, 2010.

<sup>27</sup> For comparison, the Libyan system is older and less sophisticated than the Iraqi air defense network that was neutralized by U.S. and allied forces early in Operation Desert Storm.

<sup>28</sup> International Institute for Strategic Studies, “Chapter Seven: Middle East and North Africa,” in *The Military Balance 2011*, 111<sup>th</sup> ed. (London: Brassey’s, 2011).

Air Force estimates that the Libyan air force is flying only “multiple tens” of sorties per day.<sup>29</sup> As Libyan pilots are believed to average only 85 flight hours per year, though, even those aircraft which are operational may not be flown effectively.<sup>30</sup> Libya’s aircraft are also rather antiquated, mostly Soviet-era fighters with a few more modern French Mirage jets. On February 21, 2011, two Libyan Air Force colonels flew two of the Mirages to Malta, where they were interned.<sup>31</sup>

## **Geography**

As noted, most of Libya’s major urban centers, as well as its air defense assets, are located along the Mediterranean coast. This means that carrier-based and other naval forces could be useful in establishing and enforcing a no-fly zone. The four main Libyan air bases are also located near the coast.<sup>32</sup>

Libya borders on Chad, Sudan, Niger, Tunisia, Algeria, and Egypt. However, the most compatible sites to base U.S. forces are across the Mediterranean—Sigonella, Sicily and Souda Bay, Crete. The United States has operated from both bases in the past, and maintains a presence at Sigonella. Access to these bases would be up to the governments of Italy and Greece, respectively; also, as Sigonella is officially a NATO base, NATO’s permission would be required as well.

## **Concept of Operations**

In testimony before the House Armed Services Committee, Marine Corps Commandant General James F. Amos recently called Libya’s helicopter forces the “greatest threat” to anti-Qadhafi forces.<sup>33</sup> This would suggest that simply enforcing caps over the main Libyan air bases to suppress fixed-wing flights would not be sufficient to eliminate the main Libyan air threat, and could require operations throughout Libya’s airspace. As previously noted, this would be a more complex operation than simply monitoring fixed air bases, and could require neutralization of Libyan air defenses throughout the country, not just along the coast. Paragraph 11 of Resolution 1973 “decides that the Member States concerned shall inform the Secretary-General and the Secretary-General of the League of Arab States immediately of measures taken in exercise of the [no-fly zone] authority conferred by paragraph 8 above, including to supply a concept of operations.”

---

<sup>29</sup> Gen. Norton Schwartz, in testimony before the U.S. Congress, Senate Committee on Armed Services, *Testimony on the Department of the Air Force in review of the Defense Authorization*, 112<sup>th</sup> Cong., March 17, 2011.

<sup>30</sup> International Institute for Strategic Studies, “Chapter Seven: Middle East and North Africa,” in *The Military Balance 2011*, 111<sup>th</sup> ed. (London: Brassey’s, 2011).

<sup>31</sup> “Malta refusing to return Libyan fighter jets, says it denied landing to plane carrying pilots,” *Canadian Press*, March 1, 2011.

<sup>32</sup> General James F. Amos, in testimony before the U.S. Congress, House Committee on Armed Services, *Testimony on the Department of the Navy in review of the Defense Authorization*, 112<sup>th</sup> Cong., March 1, 2011.

<sup>33</sup> *Ibid.*

## **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 Richard F. Grimmett.

CRS Report R41199, *The War Powers Resolution: After Thirty-Six Years*, by Richard F. Grimmett.

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 RL33142, *Libya: Unrest and U.S. Policy*, by Christopher M. Blanchard

**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
<b>Southwest Asia</b>											
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		
<b>Former Yugoslavia (Kosovo)</b>											
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.

## **Author Contact Information**

Jeremiah Gertler, Coordinator  
Specialist in Military Aviation  
jgertler@crs.loc.gov, 7-5107

Christopher M. Blanchard  
Acting Section Research Manager  
cblanchard@crs.loc.gov, 7-0428

Stephen Daggett  
Specialist in Defense Policy and Budgets  
sdaggett@crs.loc.gov, 7-7642

Catherine Dale  
Specialist in International Security  
cdale@crs.loc.gov, 7-8983

Jennifer K. Elsea  
Legislative Attorney  
jelsea@crs.loc.gov, 7-5466

Richard F. Grimmett  
Specialist in International Security  
rgrimmett@crs.loc.gov, 7-7675