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The Honorable Donald H. Rumsfeld
Secretary of Defense
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Dear Don:

I am writing to share with you lessons RAND researchers have drawn from U.S. military planning and operations in Iraq and their recommendations for future DoD policies. I would be surprised if the issues are all that new to you, and some of what we recommend may already be under way. What we do bring is a perspective based on extensive and in-depth RAND research involving over 20 studies that were undertaken across our three FFRDCs.

Let me highlight a few of our critical lessons and recommendations. A discussion of these as well as others can be found in the enclosed memorandum.

- Be cautious with respect to Army transformation plans that move to lightly-armored vehicles and heavy reliance on networked information systems, given the difficulty in translating good sensor coverage of the battlefield into good situational awareness.
- Give serious attention to creating a dedicated cadre of counterinsurgency specialists.
- Assign responsibility to a single Army officer to redesign the Army's reserve mobilization systems.
- Be realistic with respect to expectations of what air attacks can achieve in bringing about the overthrow or collapse of an enemy regime.

You will see that we have tailored our recommendations to those issues directly within your responsibility as Secretary of Defense. We hope that these will be useful to you this spring in your strategic planning activities, including the QDR. I am ready to discuss these with you, and the researchers are ready to brief you or your staff on the details of our analyses.

Warm regards,

JAT:jr

Enclosure

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IRAQ: TRANSLATING LESSONS INTO FUTURE DoD POLICIES

This memorandum presents lessons RAND researchers have learned from looking at U.S. military planning and operations in Iraq and our recommendations for future DoD policies. In each case, the first bullet describes the lessons learned and the second bullet briefly outlines our recommendations.

In many ways, Iraq was no match for coalition forces during major combat operations: the Iraqi leadership was strategically and operationally incompetent; Iraqi regular forces were weakened, poorly trained, and poorly equipped; and the paramilitary forces lacked training and popular support. Despite these conditions, we believe that the experience in Iraq holds very important lessons and should inform future DoD policies. There is a case for change, and even urgency, in those areas where problems arose even in such favorable circumstances.

The memorandum is divided into three parts: lessons and recommendations for conducting major combat operations, for responding to insurgencies, and for designing the NSC and DoD policymaking processes.

I. Lessons for conducting major combat operations

1. *Air Operations and Regime Change*

- As in previous conflicts, our ability to dominate operations in the air shaped the joint campaign fundamentally. It enabled a lean deployment to rear areas that were secure and it provided for unprecedented levels of situational awareness. Iraqi soldiers' appreciation that they had no defense against coalition air attacks caused units to disperse and hide, made soldiers afraid to fight, and ruled out large-scale maneuver operations by conventional Iraqi ground forces. Air attacks alone, however, did not achieve the broader strategic objective of *regime collapse* through attacks aimed at decapitating, isolating, or breaking the will of the enemy leadership—the concept of “shock and awe.” The attacks on “regime” targets (leadership, command and control, and infrastructure) were able to disrupt, but not eliminate, the ability of Iraqi leaders to communicate with the Iraqi people and military forces.
- For the future, a caution is in order with respect to expectations of what air attacks on “regime” targets can achieve. Put simply, prompt regime collapse or decapitation is generally unlikely because of a host of limitations, some self-imposed, on the effectiveness of such attacks. Achieving operational surprise is unlikely. The kind of intelligence needed to pinpoint leaders is hard to acquire, given the opportunities leaders have to hide. Redundant communication networks are difficult to break. Political constraints on targeting will always be imposed so as to minimize civilian casualties and damage to infrastructure. And, in any case, the psychological effects of air attacks against “regime” targets cannot be expected to emerge quickly.

2. *Integration of Air-Land Operations*

- The Iraq operation demonstrated the increasing interdependence of air and ground forces. Expeditionary operations are driving leaner deployments, and lighter and more mobile U.S. forces are more dependent on information and fires from sources "external" to the Army. Air forces took up the challenge, and, in fact, the primary contribution of fixed-wing aircraft in Iraq was in attacks on enemy forces and their support facilities. Air operations reduced substantially the costs and risks of ground operations. At the same time, air forces were dependent on land forces to generate ground targets in many situations, by their ability to flush enemy forces from hidden positions and to compel them to respond. Air forces were not responsive enough to take over the Army's mission of suppressing enemy mortars and artillery. Deep attack Apache helicopter missions in Iraq proved risky and not very productive, while opportunities were lost to employ them for close support or reconnaissance. Though planned, no air assault operations were undertaken, primarily because the risks outweighed the expected benefits.
 - For the future, much can be done to enhance the effectiveness of air support to ground operations. Fixed wing aviation should be better integrated with ground forces by increasing the realism and frequency of joint training, continuing to refine and field blue force tracker systems, and investing in better equipment for forward air control teams. Attack helicopters should have close support as their primary mission. The experience in Iraq involving the employment of attack helicopters raises questions about some of the emerging concepts that place high reliance on so-called vertical envelopment operations deep into enemy territory.
 - Changes need to be made in the traditional linear approach to the coordination of air and ground fire support. A nonlinear system of "kill boxes" should be adopted, as technology permits. This would involve designating areas of the battlefield as closed or open. Kill boxes around friendly forces would normally be closed, i.e., no air attacks without positive approval by terminal or forward air controllers. Kill boxes farther from friendly forces would normally be open, i.e., positive control would not be required. The attraction of such a system is that the kill boxes can be sized for open terrain or urban warfare, and opened or closed quickly in response to a dynamic military situation.

3. *Situational Awareness on the Battlefield*

- The Iraq military campaign saw the operation of a variety of platforms and sensors that truly transformed the battlefield. But their utility depended on the level of command. Division commanders and above were well served, while tactical commanders often did not receive specific or actionable intelligence. Accessing the intelligence required an operational pause, which was not attractive because it slowed

the advance and exposed the forces to attack. Tactical units were often moving too fast for the information to be useful, or the information was not detailed enough. Iraqi armored forces were able at times to exploit camouflage and concealment to avoid detection from the air. Most Army engagements were meeting engagements that occurred when Iraqi forces, typically *Fedayeen* and other irregular forces, opened fire and revealed their position. Additionally, the airborne sensor array deployed to Iraq was in many cases unable to locate and identify the type of threat that U.S. ground forces faced, namely relatively small groups of light infantry-type enemy forces deployed in built-up areas or moving along roads in civilian vehicles. The lesson from Iraq is that having good sensor coverage of the battlefield does not necessarily translate into good situational awareness.

- For the future, systems and procedures need to be designed from the bottom up to give the tactical commander the information he needs. This will require wideband satellite communication systems and UAVs (non-line-of-sight systems) for tactical units, as well as trained personnel who can quickly interpret the information. Developers of the Army's Future Combat Systems and the Air Force's Link-16 (and its successors) need to ensure that maneuver forces can directly access increasingly powerful air sensors operating above them. Procedures need to be designed not only for tailoring reports from the various sensors for tactical commanders but also for disseminating intelligence from individual sensors directly and quickly to these commanders. Until these steps are taken, the Army needs to be cautious in its transformation plans to shift to a family of more lightly armored fighting vehicles that will rely heavily on networked systems of information and situational awareness. This is reinforced by the experiences of Army forces in Iraq's cities in more recent counterinsurgency operations.

4. *Integration of Special Operations and Conventional Forces*

- Special operations forces played a critical part in all aspects of operations in Iraq, which was the largest and most complex mission for these forces in the nation's history. Nevertheless, fearing compromise of the operations, the decision to deploy special operations forces was delayed until just before the launch of major combat operations. There were also problems integrating operations involving conventional and special operations forces, arising from differences in perspectives, operating concepts, and command and control systems:
 - In the future, steps need to be taken to exercise conventional and special operations forces together, as was the case in the past at the National Training Center. Especially important will be finding ways to build trust among the leadership of these two forces, through training at the various command and staff schools. Policymakers also need to understand the need to deploy these forces as early as possible, a step that could be made easier if this community found ways to communicate better to senior officials what their capabilities and needs are at the unclassified as well as the classified level.

5. Security of Army Supplies

- The unanticipated need in Iraq to secure supply lines against *Fedayeen* attacks necessitated a short operational pause. It also reinforced the need for all units to be capable of combat, and highlighted the fact that many forces may be needed to secure the supply lines. Supply problems emerged in Iraq during major combat operations because of insufficient trucks. Problems for spares were exacerbated by a lack of mobile satellite communications systems. Although these problems increased the risk, they fell short of impeding the operation.
 - For the future, the Army needs to address the fundamental question of what limits will be imposed on its concepts for simultaneous and extended maneuver operations by the need to provide security for logistics operations as well as the constraints (both financial and those imposed by enemy attacks) that continue to limit the amount of intratheater airlift capacity that can be brought to bear.

6. Exploitation of Sensitive WMD Sites

- The exploitation of sensitive WMD sites in Iraq was unique for the breadth of the target set and the scope of the effort. Although no weapons or materials were found, the lesson from Iraq is that tensions will arise between operational military imperatives and the requirements of an exploitation mission. In allocating sensor coverage in Iraq, hunting for WMD was given priority over providing information to tactical commanders. But in the military operations themselves, a rapid drive to Baghdad was given priority, not securing the sensitive sites or protecting the exploitation team members. The resulting extensive looting at many sites made it difficult to ascertain whether weapons, materials, critical computer files, or documents had been removed or destroyed. When the exploitation task evolved from discovering caches of weapons to detective work in trying to find evidence of weapons, the teams lacked experts in conducting investigations as well as a mandate to collect human intelligence. The primary casualty of checking every site was the availability of time at any one site to search for evidence, making it even more difficult to answer the questions as to how the programs were set up, what had been accomplished since the UNSCOM inspectors left, and who were the key individuals in the programs.
 - In future military operations the need to exploit sensitive sites is likely to arise, whether it is in the form of hunting for terrorists (as in Afghanistan) or WMD (as in Iraq). Civilian and military staffs in the DoD need to introduce requirements for site exploitation missions early into the military campaign planning, so that the tensions can be understood in advance and the explicit tradeoffs made. Building on the experiences of the innovative Sensitive Site Exploitation headquarters in Iraq, it would make sense to create in the Army a permanent small cadre of specialists, technical experts, and MPs who plan and train for these missions, notwithstanding the additional costs.

6. Information Operations

- An important tool of Sadaam Hussein in both controlling his own population and manipulating perceptions internationally was his broadcast capabilities, particularly through access to satellite television. Broadcast capabilities comprise a difficult target set because they are redundant, dispersed, mobile, easily repaired and replaced, and often located with the high potential for collateral damage. But the lesson from Iraq is that one aspect of information operations deserves greater attention and particular emphasis, and that is fighting the enemy's public information campaign.
 - For the future, new concepts need to be considered to take on this task, perhaps to include stand-in jammers, high-powered microwave weapons, and proliferated jamming transmitters to disrupt/defeat the regime's propaganda.

6. Bomb Damage Assessment

- The process for assessing the effects of air attacks in Iraq fell behind early, despite the best efforts of the analysts. Many factors contributed, including bad weather, inadequate reporting from operators, and a scarcity of sensor systems and analytical resources. Turnaround times were measured in days instead of hours. The uncertainties arising from these delays resulted in air forces restriking targets unnecessarily and ground forces having scant knowledge of the condition of enemy forces along the route of advance. Without such information, it was also not possible credibly to refute enemy claims about civilian damage caused by coalition bombing.
 - For the future, the military services jointly should take steps to improve the bomb damage assessment process through changes in joint tactics, techniques, and procedures. A premium should be placed on quickly providing these assessments not only to military commanders but also to political leaders. More specifically, the Army should find ways to ensure that ground force assessment processes adequately address the concerns of ground force commanders and to integrate the products of damage assessment analysts with order-of-battle analysts, who have training in this task as well. Another step for improving bomb damage assessment would be to develop automated tools for generating and managing the flow of tactical reporting and to introduce joint training exercises. Finally, it should be possible to modify air-delivered missiles and bombs so that they report their location via a burst radio transmission just prior to detonation.

9. *Planning and Resourcing Post Conflict Activities*

- Planning for military combat and postwar operations in Iraq lacked the flexibility necessary to enable the U.S. military to respond to the situation that emerged after the defeat of the Saddam Hussein regime. Post conflict stabilization and reconstruction were addressed only very generally, largely because of the prevailing view that the task would not be difficult. What emerged was a general set of tasks that were not prioritized or resourced. The possibility that these activities might require more resources, or a different mix of resources, than the earlier military operations was not contemplated.
 - For future intervention scenarios, the likelihood that the United States and its allies will quickly defeat outmatched opponents and then spend months or years winning the peace argues for an "inverted planning process," i.e., that the military and civilian resources required for securing the peace and reconstruction be given *primary* focus in the plan and priority in resources. Some process for exposing senior officials to possibilities other than those being assumed in their planning also needs to be introduced.

9. *Stability Operations and the Role of the Military*

- No planning was undertaken to provide for the security of the Iraqi people in the post conflict environment, given the expectations that the Iraqi government would remain largely intact; the Iraqi people would welcome the American presence; and local militia, police, and the regular army would be capable of providing law and order. By not including civil police in its nation-building operations, the burden for handling public security in Iraq fell upon coalition military forces, which were ill prepared. Iraq demonstrates that the military mission of providing security in the post-conflict environment is just as important to achieving a strategic victory, if not more important, than the military mission of winning decisive combat operations.
 - For the future, the U.S. military cannot assume that some other organization, either within the U.S. government or in the host country, will take responsibility for providing law, order, and security through the transition period from the end of conventional military operations until a generally secure environment has been established. Until civilian agencies can operate in a secure environment, military personnel will need to be trained and prepared to assume responsibility for public security—including overseeing local police activities, providing short-term training, and directly suppressing criminal activity.

II. Lessons for responding to insurgencies

1. Counterinsurgency Operations

- Iraq underscores first the overwhelming organizational tendency within the U.S. military not to absorb historical lessons when planning and conducting counterinsurgency operations. Missing in Iraq was the recognition of how critical political-military coordination is in waging an effective counterinsurgency as well as the essential element of actionable intelligence on the insurgents. But problems also arose because of a failure to understand how this Iraqi insurgency differs from past "wars of national liberation" and a "classical guerrilla-type campaign." Iraqi insurgents are groups of disparate opposition elements with no center of gravity, no clear leader, no aim to seize and hold territory, and no single, defined, or unifying ideology. The Iraq insurgency demonstrates the closest manifestation yet of "net war," which is characterized by flatter, more linear networks rather than the pyramidal hierarchies and command and control systems of traditional insurgent organizations.

- In the future, U.S. military forces engaged in counterinsurgency operations must be composed of personnel with training and skills similar to special operations forces, i.e., the language and culture of the country, and in the critically important political, economic, intelligence, organizational, and psychological dimensions of counterinsurgency warfare. Serious attention should also be given to creating in the Army a dedicated cadre of counterinsurgency specialists and a program to produce such experts.

2. Role of Special Operations Forces in Building Indigenous Security Forces

- Special operations forces in Iraq have been used predominantly in what is known as their direct action mission, that is, as a "high-value target" posse deployed on successive special mission task forces. They have been notably absent, for example, from the training and advising of indigenous Iraqi military and security forces, or accompanying them in counterinsurgency operations.

- In the future, U.S. special operations forces need to be at the core of any successful counterterrorist and/or counterinsurgency strategy. In this respect, they can bring a distinct and advantageous "force-multiplying" capability to bear through their language proficiency and intercultural communications skills. They are also expert in training indigenous forces about how to win the trust of their fellow citizens and how to protect those citizens from insurgent attack and reprisals, as well as in organizing indigenous populations for their own self-defense, thereby giving them a stake in the outcome of their government's success. Because of their intimate understanding of unconventional environments, they can play a pivotal role in promoting sound civil-military relations.

- In this context, special operations forces can also perform a critical "combat advisor" role, as they did in northern Iraq with the Kurds. Not only would they train Iraqi forces, but they would also have the flexibility to accompany these forces on counterterrorism and/or counterinsurgency operations to follow through on the training received, and coach and mentor them on how such missions can be most effectively and successfully executed. Performing this advisory role would also place them in a position to synchronize U.S. intelligence, operations, and logistical support and in turn help ensure that U.S.-provided resources are being properly used and that rapport and trust is developed and maintained.

3. *Air Force and Army Supply Operations*

- As military operations in Iraq continued beyond major combat, the system for distributing spares and other on-demand items remained relatively slow for many months. Distribution problems resulted from a misalignment between the packaging and configuration of loads in the United States and the handling and distribution capabilities in the theater, and also from delays in increasing the capacity of U.S. distribution centers (i.e., warehouse and load consolidation centers). As very high demands continued, the system began to experience high backorders as national inventories, which had significant war reserve shortfalls, were drained. An industrial base surge was delayed by slow budget approval to place orders for quantities of spares above baseline demand levels. In supplying Air Force units, problems arose in coordinating the strategic and theater movements systems, in ensuring in-transit visibility, and in paying for the shipments. As a result, cargo built up at transshipment points for Air Force supplies. In contrast, distribution delays did not generally occur at transshipment points for Army supplies.
 - A common commodity supply chain guiding vision or model setting out basic operating principles needs to be adopted by all supply chain organizations, including the Services, joint logistics commands, government agencies, and their commercial partners. The joint and service planning and assessment processes, doctrine, organization, training, and information systems then need to be modified for consistency with the model and to ensure that the assumptions of the organizations in the supply chains are consistent with the capabilities of their suppliers and customers. The goal is for the supply chains to be optimized as a whole rather than having each process optimized in and of itself. Ensuring that the system stays aligned with the model once a contingency begins then calls for the adoption of improved monitoring and control capabilities for logistics situational awareness so as to provide near-real-time feedback when problems begin to arise.
 - The processes for planning and executing the airlift of supplies need to focus on outcomes, with a cadre of permanent staff in all operational theaters. The changes made during the course of operations in Iraq in how Army materiel is packaged for shipment should be embedded in joint policy and integrated into

processes better designed to quickly make transitions to new locations as contingencies develop.

- Finally, there is the need throughout DoD to appreciate better the long lead times involved in providing parts for many critical weapon systems. These lead times call for an improved ability to quickly forecast contingency requirements; for a more rapid pre-contingency approval of contract authority for additional orders; for reducing the time needed to approve an increase in the Defense Logistics Agency workforce so as to expand the capacity of its distribution centers; for alerting senior policymakers to the risks when a given concept of operations must be adjusted for lack of logistics resources; and for changing the ways the Army computes and reserves war reserve inventory levels, given that some critical items with long lead times can only be supported in this way. The long-term effects of even small shortfalls in national supply and distribution capacity can be dramatic.

III. Lessons for designing the NSC and DoD policymaking processes

1. NSC Processes for Post-Conflict Planning and Operations

- Historically, administrations have struggled to find ways to integrate military and civilian planning and activities for the period when major combat operations come to an end. The Iraqi experience was no different, with frustrations recorded universally among both military and civilian organizations. The NSC coordinating effort for Iraq focused largely on military operations and plans for providing humanitarian assistance, not post-conflict activities. Responsibility for such planning and operations was given to DoD, but separate from the military command. Overall, this approach worked poorly, because DoD lacked the experience, expertise, funding authority, local knowledge, and established contacts with other potential civilian organizations needed to establish, staff, support, and oversee a large multi-agency civilian mission.
- Unity of command and broad participation are both important to the success of stabilization and reconstruction operations. There is a case to be made that such responsibility reside with a senior State Department official, who would be appointed as a special Presidential envoy with authority to convene an NSC interagency planning group. But who is given such responsibility is not as important as the requirement that the planning and operations be based on a full understanding of the operational military plan and that it involve both civilians and military officers with expertise in security and law enforcement, in various reconstruction operations, and critically in the culture of the region of the conflict. For this to happen, the Secretary of Defense will need personally to support a civilian-led planning effort and most importantly direct such sharing of operational military information. An active NSC interagency process will also be necessary to ensure that the State and Defense Departments are acting off the same sheet of paper and to bring forward

debate of alternative views and subsequent decisionmaking on important issues. Policy differences need to be expressed and adjudicated, if necessary by the President, as the planning process goes forward.

2. DoD Process for Force Deployments and Mobilization of Reserves

- Within DoD, the principal organizational lessons from Iraq concern the militarily important and politically sensitive process of force deployments and mobilization of the reserves. In Iraq, the deployment of forces was accomplished through a procedure of separate requests from the commander for each force component. This had the advantage of tailoring the forces to the diplomatic and military situation, but it led to high-level micromanagement, delay, and disruptions. Because alert times were then compressed, most units received less than 30 days of mobilization notice. Extensive small, sequential requirements also led to readiness problems within units and administrative burdens. The Iraq experience also showed that the Army mobilization system is fragmented in terms of responsibilities, with no single organization responsible for monitoring performance or synchronizing the activities with others in DoD. This led to surprises, frictions, and false starts. The Army's outdated and inadequate information systems exacerbated these problems.
 - For the future, the processes of deploying forces and mobilizing reserves within DoD need to be fundamentally redesigned to reflect the high political stakes as well as the critical military requirements in future military operations. A single Army officer needs to be accountable for redesigning the Army's reserve mobilization system and for how it performs. The system should involve the application of metrics for performance, such as meeting the commander's requirements, minimizing reserve soldier time on active duty, and providing predictability throughout the mobilization process. New information systems also need to be introduced to help integrate all these activities.

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