

Chapter V

The Army and the Environment: Environmental Considerations During Army Operations

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Victory smiles upon those who anticipate the changes in the character of war, not upon those who wait to adapt themselves after they occur.

General Giulio Douhet, 1920¹

In the aftermath of the Gulf War and the subsequent U.S. military operations in Somalia and Haiti, governments and international organizations have renewed the debate concerning military operations and their effect on the environment. Via CNN, Americans and the world viewed environmental damage caused by Iraq's demolition of Kuwaiti oil wells and the deliberate release of oil into the Gulf. In response, allied military forces conducted precision air strikes in an effort to stop the flow into the Gulf and to extinguish oil well fires. The consequences of these events will effect natural resources for decades.

Likewise, allied forces during Operation Desert Storm conducted the largest land combat campaign since World War II. The mobilization, deployment, and combat operations leading to eventual destruction of the Iraqi forces had a significant impact on the environment. As an example, U.S. forces fired 11,000 depleted uranium rounds during Operations Desert Shield and Desert Storm. Due to the better armor piercing capability of depleted uranium munitions, the combat power of the U.S. military was enhanced by firing these rounds from Army and Marine Corps tanks and U.S. Air Force attack aircraft. However, if left on the battlefield, uranium, a radio-active heavy metal, may result in environmental damage, as well as physiological effects to soldiers and noncombatants.²

What is the long-term environmental impact of these events and to what extent should military forces consider these as factors during the planning and execution of military operations? In peacetime, environmental compliance is paramount. To what extent will environmental considerations apply during war? How should the Army consider these issues in its doctrine and training?

Policy makers, academia, and environmental organizations may have a distorted sense of the environmental constraints that can realistically be placed on

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commanders during combat operations. The purpose of this paper is to examine the extent to which environmental considerations should be a factor in Army operations across the spectrum of conflict.

Part I of this paper examines the Army's mission, what it must be able to accomplish to be successful on the battlefield, and the possible environmental impacts of those actions. Part II concentrates on how environmental considerations are examined during the Army's decision-making process. The final portion of this paper, Part III, addresses what initiatives the Army is taking to integrate environmental considerations into its training and doctrine.

Defining the Environment

Military doctrine defines the battlefield environment as specific features or activities requiring further analysis, the physical space where they exist, and how these features may influence courses of action or commanders' decisions. For purposes of this paper, the definition of environment is broadened to include the earth's human ecosystem, both physical and biological systems, that provides the resources necessary to sustain productive human life: clean air, clean water, healthy surroundings, and sufficient food.

PART I - THE ARMY AND LAND COMBAT

The United States Army exists to support and defend the Constitution of the United States. It does that by deterring war and, if deterrence fails, by providing Army forces capable of achieving decisive victory as part of a joint team on the battlefield — anywhere in the world and under virtually any conditions.

Field Manual 100-5
Army Operations

Decisive Victory

The Army must be capable of decisive victory in full-dimensional operations. This encompasses employing all means available within the laws of war to accomplish any given mission across the full range of possible operations, both in war and in military operations other than war (MOOTW).

To achieve victory, the Army must maintain the capability to put overwhelming combat power on the battlefield to defeat all enemies through a total force effort. Army forces must be of the highest quality, able to deploy rapidly, to fight, to sustain themselves, and to win quickly with minimum casualties.

Our warfighting doctrine reflects the nature of modern warfare. It applies the principles of war and combat power dynamics to contemporary and future battlefields within the strategic policy direction of our government.³

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Application of Combat Power

Army forces in combat seek to impose their will on the enemy; in operations other than war, they seek to alter conditions to achieve their purpose. Victory is the objective, no matter the mission. Nothing short of victory is acceptable.

Field Manual 100-5
Army Operations

The Army's role is to gain victory on the battlefield through the swift, overwhelming application of maximum available combat power. Combat power is a destructive action which must be focused to minimize collateral effects and to promote the peace which must follow. The objectives for its employment must be clear, achievable, and understood by leaders at all levels.

Combat power is created by combining the elements of maneuver, firepower, protection, and leadership. Overwhelming combat power is the ability to focus sufficient force to ensure success and deny the enemy any chance of escape or effective retaliation. Our objective is to kill, wound, capture, or render the enemy incapable of influencing future battlefield events. If we are successful, the enemy is frozen by fear and uncertainty, confused, and isolated. Overwhelming combat power is achieved when all combat elements are quickly brought to bear, giving the enemy no opportunity to respond with a coordinated or effective response.

Commanders seek to apply overwhelming combat power to achieve victory at minimal cost. They strive to convert the potential of forces, resources, and opportunities into actual capability through violent, coordinated action at a decisive time and place. Army commanders multiply the effects of combat power through the integrated efforts of combat (infantry, armor, artillery, air defense, aviation), combat support (engineers, chemical, military police), and combat service support (logistics, medical), units as well as support provided by assisting Air Force, Marine Corps, and Navy forces. Firepower provides destructive force. It is essential in defeating the enemy's ability and will to fight.⁴

Environmental Impacts During Combat Operations

Kindhearted people might of course think there was some ingenious way to disarm or defeat an enemy without too much bloodshed, and might imagine this is the true goal of the art of war. Pleasant as it sounds, it is a fallacy that must be exposed; war is such a dangerous business that the mistakes which come from kindness are the very worst.

Karl von Clausewitz⁵

Environmental damage is an inescapable consequence of combat operations. In ancient times, the massing of armies destroyed the harvest and turned the battlefield to mud. In recent times, the destructive power of weaponry and maneuver has dramatically increased the environmental impacts that result from military operations. These impacts are magnified by the exponential expansion of the world's population, our intensive use of natural resources, and the systemic destruction and fragmentation of habitat world-wide by urbanization, agriculture, mechanized land clearing, and transportation systems. Consequently, the environmental effects of war are more devastating and proportionally greater than at any time in history.

As Clausewitz warned, there is no way that war can be made "nice." When a nation strives to make war "nice," or accepts limitations on the use of force beyond those required by the law of war, it does so at its own peril. A less-moral nation will take advantage of its opponent's constraint, often to the detriment of the civilian population in the battle zone, as well as the army fighting with restraint. The Vietnam War is a painful example of this mistaken thinking.⁶

For example, during the 1968 Battle of Hue in Vietnam, Marines were tasked with a three-fold mission: destroy as many of the enemy as possible, minimize casualties, and minimize collateral damage to the historical city. Formerly the imperial capital of united Vietnam and the center of Vietnamese cultural and religious life, Hue became an important symbol in the struggle for dominance of Indochina. Marines were instructed not to use heavy weapons in order to preserve the ancient city. The enemy capitalized on America's restraint by forcing the Marines into a bloody, house-by-house battle. As the number of friendly casualties increased to a devastating level, the weapons restriction was lifted and the city was secured.⁷

Impacts on the Environment

Actions that inflict environmental impacts during the conduct of war can be divided into three broad categories:

- Collateral damage
- Wanton, unnecessary impact
- Modification of the environment

Collateral damage results from military actions to achieve strategic, operational, or tactical objectives during armed conflict. The ultimate objective of each commander is to achieve victory over the enemy at minimal cost to friendly forces through the application of overwhelming combat power.

Two of the principal components of combat power are maneuver and firepower. Each exacts a toll on the environment and the impacts of protracted warfare on the environment are inherently destructive. Off-road maneuvering of armored, tracked vehicles such as tanks, personnel carriers, and self-propelled artillery can

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inflict extensive damage on sensitive ecosystems. Concentrating firepower on enemy targets can decimate habitat. The destruction of enemy targets such as fuel storage areas and munitions stockpiles results in the release of hazardous substances and pollutants into the environment, contaminating the land, the water, and the air. Unintended collateral damage to other facilities, such as waste water treatment plants, also can result in additional pollution.

The principles of war are the enduring bedrock of Army doctrine. Their application enables the Army to achieve quick and decisive victory. Environmental considerations should not obstruct the application of the principles of war during armed conflict. Environmental restraints should not increase the cost of victory to friendly forces, the probability of a prolonged conflict, or the probability of an unfavorable outcome. Take, for example, the principles of maneuver and surprise. By maneuver we place the enemy in a position of disadvantage through the flexible application of combat power. Maneuver is dynamic warfare that rejects predictable patterns of operations. By surprise we strike at a time or place or in a manner for which the enemy is unprepared. Commanders combine variations of tactics and methods of operation as well as deception to surprise the enemy with the unexpected application of combat power.

Victory requires that Army commanders have maximum flexibility to maneuver against and surprise the enemy. Restricting military operations to avoid ecologically sensitive habitat, or imposing a no-fire zone because of a target's potential to pollute, could provide the enemy with the ability to predict our actions. This allows him to protect his forces from attack and prolong the war.

During combat operations, emphasis must be placed on mission accomplishment. The goal of minimizing environmental impacts is best achieved by applying the principles of war to achieve quick, decisive victory. Unavoidable environmental impacts necessary and proportional to such a response must be allowed. Restricting the application of combat power to predictable patterns of behavior based on environmental considerations must be avoided.

Wanton, unnecessary impact consists of actions that inflict environmental damage that cannot be justified by military necessity. This is the type of damage most recently associated with Iraq's actions in the course of the Persian Gulf War. During its occupation of Kuwait, Iraq set Kuwaiti oil fields ablaze and fouled the waters of the Persian Gulf by releasing millions of barrels of crude oil into the environment. These activities violate Article 55 of Hague Convention IV, which requires belligerents to safeguard the real property of hostile States and to administer such property in accordance with the rules of conflict.⁸ Additionally, Article 51 of the Fourth Geneva Convention⁹ forbids any destruction of real property unless it is absolutely necessary for the conduct of military operations. The United States and military services condemn such conduct, which is excessive,

unnecessary, and only peripherally related to achieving strategic and tactical military objectives.

Modifications to the environment consists of actions that are environmental modification techniques which cause widespread (“encompassing an area on the scale of several hundred square kilometers”), long-lasting (“lasting for a period of months, or approximately a season”), or severe damage (“involving serious or significant disruption or harm to human life, natural or economic resources, or other assets”) intended to gain a tactical advantage. These actions are addressed by the 1977 Environmental Modification Convention.¹⁰

Disciplined Operations

War is tough, uncompromising, and unforgiving. The Army operates with applicable rules of engagement (ROE), conducting warfare in compliance with international laws and within the conditions specified by the commander. The ROE specify the circumstances under which forces may engage the enemy. The Army applies the necessary combat power to ensure victory through appropriate and disciplined use of force.

Exercising discipline during operations includes limiting collateral damage which is the inadvertent or unavoidable damage occurring as a result of actions by friendly or enemy forces. Discipline begins with trained leaders whose personal example, standard of conduct, concern for soldiers, and loyalty to subordinates creates well-disciplined units and proper conduct of battlefield operations. Army Field Manual 27-10, *The Law of Land Warfare*, provides guidance to commanders on international law and the Geneva and Hague Conventions. It also governs appropriate soldier conduct in war.¹¹ Field Manual 41-10, *Civil Affairs Operations*, provides guidance on control and treatment of displaced civilians.¹²

A nation that disregards the human rights of individuals makes warfare unnecessarily harsh, increases the resolve of its enemy, and changes the nature of the conflict. How the Army fights is a mark of what it is and the principles for which it stands. Laws of war are only effective in reducing casualties and enhancing fair treatment of combatants and noncombatants as long as trained leaders ensure those laws are obeyed. The commander ensures the proper treatment of prisoners, noncombatants, and civilians by implementing training programs that reinforce the practice of respecting those laws and ROE.¹³

Law of war training, conducted in Army service schools and reinforced by unit commanders, emphasizes the military and political reasons for respect for the law:

- Discipline in combat is essential.
- Violations of the law of war detract from a commander’s accomplishment of his mission.
- Violations of the law of war frequently lead to a loss of public support.
- Violations of the law of war may arouse an enemy to greater resistance.

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Both in training and in combat, the Army strives to use sound environmental practices. Many of these are also wise tactical, medical, and operational security practices. For example, safe fuel handling, preventive vehicle maintenance, and proper disposal of solid/hazardous waste are sound environmental and tactical considerations that carry over from training into combat and operations other than war.

In some respects, protecting the natural environment may seem to run counter to the warrior culture and may even be regarded as an impediment to battlefield success. The realities of the 21st Century, however, require the incorporation of an environmental ethic into how the Army plans its battles. Military commanders have an obligation to avoid unnecessary damage to the environment whenever possible.

Environmental dilemmas faced by a commander during combat must be weighed with other considerations such as desired end-state and force protection. The warfighting staff considers these potential impacts during the decision making process. Part II of this paper explains how environmental considerations fit into the planning process.

PART II - ENVIRONMENTAL CONSIDERATIONS AND THE DECISION MAKING PROCESS

Army Decision Making Model

Before additional environmental limitations are placed on commanders, it is important to understand how environmental considerations fit into the Army's decision-making process.

The Army has traditionally viewed military decision-making as both science and art. Many aspects of combat operations, such as movement rates, fuel consumption, and weapons effects, are quantifiable. Such aspects make up the "science" of war. However, the Army cannot quantify facets like the impact of leadership, the complexity of modern operations, and the uncertainty regarding enemy intentions.

A commander continually faces situations involving uncertainties, questionable or incomplete data, and several possible alternatives. As the primary decision maker, the commander, with the assistance of the battle staff, must not only decide what to do and how to do it, but must also recognize if and when a decision must be made.

The Army teaches commanders and staff to use a systematic approach to decision-making. It fosters effective analysis by enhancing the application of professional knowledge, logic, and judgment.¹⁴ These steps guide the staff to:

1. Recognize and define problems.
2. Gather facts and make assumptions to determine the scope of, and the solution to problems.

3. Develop possible solutions.
4. Analyze each solution.
5. Compare the outcome of each solution.
6. Elect the best solution.

Intelligence Preparation of the Battlefield

To gather information for the first two steps of the decision-making process, the staff conducts the Intelligence Preparation of the Battlefield (IPB). This review is a continuous process of analyzing the threat and area of operations, in a specific geographic area. It is designed to support the decision-making process.

During the IPB process, the staff identifies significant characteristics of the area for future analysis. These specific features may influence available courses of action or the commander's decision. For example, during humanitarian assistance operations, the activities of civilian relief organizations might be a significant characteristic of the battlefield. Similarly, during support to counter-drug operations, significant characteristics might include the production of narcotics or the trading of weapons. For both combat operations and MOOTW, it is during this phase of the IPB process when environmental considerations are developed.¹⁵

To better understand how environmental considerations are integrated into the planning process, consider this scenario. During war, an armor commander is given a mission to destroy an enemy force and seize their defensive location which is in a key position along the allied axis of advance. After receiving the mission, the commander's staff will conduct a mission analysis of the operation. As said earlier, the foundation for this mission analysis is the information gathering phase, the IPB process.

As the staff compiles information about the mission, it discovers that the enemy's position is near a fuel storage facility. The facility is directly above an isolated water shed which supplies water to a significant portion of the local population. They realize that the water shed may be contaminated if the fuel storage tanks are ruptured. The staff notes this dilemma and continues to formulate a plan. They then prepare multiple courses of action to allow the commander to weigh the many options for the mission.

When all the additional courses of action are developed, the staff briefs the commander on the different ways his force could proceed with the attack. As a part of this briefing, the staff will address the facts and assumptions that were considered in formulating the various options. In this scenario, the staff listed as a fact that the water shed is directly below the enemy's position. As an assumption, they indicate that if the position is attacked, the tanks will be ruptured and the water shed will be contaminated.

The significance of the enemy location near the fuel storage area may prevent the armor force from simply attacking the position. The commander examines

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each course of action and weighs the significance of each one in terms of elements key to success, similar to the principles of war discussed in Part I. Based on the evaluation of each plan, the commander selects an option and directs the staff to develop the operational plan.

Due to other operational constraints, the commander may elect to attack the position, thereby causing environmental damage. Just as likely, if other viable options exist, the commander may choose another course of action and protect the local population's water supply.

Staff Organization and Operation

The Army has historically integrated other factors, such as protection of noncombatants and historical/cultural sites, during the planning process. Many of the division and brigade staff elements have some environmental planning and oversight responsibilities. These responsibilities are identified in Field Manual 101-5, *Staff Organizations and Operations*.¹⁶ Take for example the protection of cultural/historical sites and artifacts. The staff elements responsibilities include the following:

- Civil Affairs Officer (G5/S5) - Together with the Intelligence Officer, determines the location of archives, monuments, and art objects of value to the U.S., allies, or civil government. As appropriate, recommends to the Operations Officer those items which, because of political, cultural, or economic value, justify use of combat elements for their seizure and security. As appropriate, recommends to the commander the disposition of each item.
- Intelligence Officer (G2/S2) - Coordinates with the Civil Affairs Officer in locating and searching archives. May provide archives team for intelligence search. Returns archives after intelligence processing and recommends the safeguarding of archives.
- Operations Officer (G3/S3) - Prepares recommendation for adjusting tactical plans to prevent destruction of arts, monuments, and archives. Assigns special missions to tactical units to secure and safeguard such objects.
- Personnel Officer (G1/S1) - Coordinates with the Public Affairs Officer appropriate instructions for military personnel concerning treatment of arts, monuments, and archives.
- Provost Marshal (PM) - Coordinates with host-nation military and civilian police in concert with the Civil Affairs Officer.
- Fire Support Coordinator (FSCOORD) - Receives locations of the artifacts and sites from the Operations Officer to prevent destruction by fire support, such as artillery.
- Public Affairs Officer (PAO) - With the Civil Affairs Officer and the Personnel Officer, uses command information channels to release information on appropriate treatment of arts, monuments, and archives.

- Staff Judge Advocate (SJA) - Provides legal advice to ensure compliance with the law of armed conflict.

A similar process would be taken for natural resources. After reviewing the staff's actions for cultural/historical sites and artifacts, consider again the previous example of an enemy's position near a fuel storage facility. The staff works to *quickly* determine if the tactical value of the mission out-weighs other environmental factors, such as the contamination of the local water supply. The staff considers many factors including the law of war, the commander's intent, and the rules of engagement. They present their recommendation to the commander for consideration. Regardless of the type of consideration—whether a tactical factor, such as ammunition availability, or an environmental factor—the process is still the same.

This may require technical assistance from other members of the staff to fully review and integrate any environmental considerations. The Staff Engineer is the commander's terrain expert. He can identify problem areas and predict potential impact. Similarly, the Division Surgeon is the medical advisor to the staff and can identify the potential health impacts of any proposed action. The G-5 or civil affairs section can assist the SJA in determining the impact on non-combatants. Since most of the environmental considerations will be raised during the IPB process, the commander's Intelligence Officer can also help the staff in bringing all the pieces together and weighing their significance. The Intelligence Officer can also predict possible actions the enemy may take to use the environment to his tactical advantage.

Doctrinal integration of environmental considerations is a significant focus of the Army's environmental strategy. The Army is taking proactive steps, both in doctrine and training, to prepare our soldiers and leaders for the increasing environmental challenges of Army operations.

PART III - INTEGRATING ENVIRONMENTAL CONSIDERATIONS INTO DOCTRINE AND TRAINING

Full integration will occur when everyone—leaders, soldiers, families—automatically includes environmental impact considerations in the planning and execution of activities... Training and doctrine are the key. We have instilled the warfighting ethic throughout the force, and we are now instilling an environmental ethic as well... We are incorporating environmental considerations in our doctrine...in our training... in our decision-making process.

General Gordon R. Sullivan, U.S. Army¹⁷

Commander's Intent

The U.S. Army Environmental Strategy into the 21st Century, the Army's concept for environmental excellence, was signed by the Secretary and the Chief

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of Staff of the Army in November 1992.¹⁸ The strategy stated, “Leadership is the key to success. Each of you in the chain of command is responsible for ensuring that the U.S. Army’s environmental strategy is implemented and that environmental stewardship is an integral part of everything you do.”

The strategy provides policy and objectives in the various areas of environmental stewardship as well as a vision for the future. It also identifies four critical elements pertinent to doctrine and training:

- Commit the chain of command.
- Organize for success.
- Spread the environmental ethic.
- Train and educate the force.

Commit the Chain of Command

Guidance from the senior leadership is clear and sufficient. The Secretary of the Army and Chief of Staff have committed the chain of command to this mission. A parallel can be drawn between the Army’s effort to integrate environmental considerations with the proven initiatives of the Army’s safety program. The success of the safety program, as with the environmental program, hinges on commitment of the chain of command. Safety briefings cannot solve the Army’s safety problems. The number of safety-related incidents decreased when safety became a commander’s program and was integrated into the way we do business. Likewise, to decrease the impacts of Army operations on the environment, we must integrate environmental considerations into our everyday operations.

Organize for Success

In 1993, the Army’s Training and Doctrine Command (TRADOC) designated the U.S. Army Engineer School as the executive agent for the development and integration of environmental doctrine and training as they apply to tactical units and the Army in the field. Their action plan was created with the assistance of Department of the Army-level environmental staff and the other Army service schools and is delineated in five steps:¹⁹

- Establish procedures for incorporating environmental protection and enhancement into Army doctrine.
- Determine requirements for environmental training programs.
- Determine procedures for conducting individual and collective environmental task analysis.
- Determine resources needed to implement the plan.
- Establish milestones.

We must now take the action plan and determine the what, where, when, and how soldiers will be trained:

- What (doctrine and specific tasks).
- Where (resident, non-resident, unit sustainment).
- When (level of military education).
- How (type of instruction).

Spread the Environmental Ethic

Field Manual 22-100, *Military Leadership*,²⁰ defines ethics as “principles or standards that guide professionals to do the moral or right thing which should be done.”

Stewardship is a key element of the Army’s environmental ethic. Our Army is charged with protecting and defending the nation, to include safeguarding the environment. In addition, the Army has been entrusted with 12 million acres and many cultural and natural resources. The American people expect the Army to exercise good judgment in the use and management of those resources. They expect the Army to be a good steward of the assets entrusted to it.

Train and Educate the Force—Doctrinal Integration

Environmental issues play an ever-increasing role on the battlefield, and they are becoming even more significant in conducting military operations other than war. Army units now face an incredible mix of operational requirements. Recent deployments have placed small units and junior leaders in critical situations where there are few rules and personal judgment is the best guide. For these reasons, the Army must provide environmental guidance in every level of doctrine.

Army operational doctrine is comprehensive. It integrates hundreds of subjects into a tightly crafted collection of writings that provide guidance to soldiers at every level. Mapping the requirements of the Army’s environmental strategy into operational doctrine will entail a gradual process of introducing concepts and norms into capstone doctrinal manuals while simultaneously developing specific requirements in procedural publications.

To be fully integrated into Army planning, training, and operations, the appropriate level of environmental considerations must be incorporated into capstone field manuals. The following capstone manuals will drive subordinate doctrine, provide the impetus for training and professional education, and begin the long-term process of preparing for the environmental requirements of the 21st century:

- FM 100-5, *Army Operations*.²¹ This capstone operational doctrine underpins all of the Army’s doctrine, training, leader development, organization, materiel, and soldier concerns. Environmental values and considerations should be included in the view of war, the strategic context, the training and readiness

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challenge, military operations other than war, and the physical dimension of combat.

- FM 100-1, *The Army*.²² The definition of the Army environmental ethic and environmental considerations belong in this source book for strategic doctrine.

- FM 22-100, *Military Leadership*.²³ This manual should discuss the environmental component of ethical leadership.

- FM 25-100, *Training the Force*²⁴ and FM 25-101, *Battle Focus Training*.²⁵ The Army's training function is directly affected by environmental factors. The training management cycle should include segments on land and endangered species management, range restrictions, training area carrying capacity, and noise.

- FM 100-10, *Combat Service Support*.²⁶ Supply, maintenance, and field service-support activities generate large quantities of waste. Petroleum storage and distribution systems are particularly prone to causing environmental problems. Logistical planning includes many environmental considerations such as health service support and waste disposal.

- FM 101-5, *Staff Organizations and Operations*.²⁷ Many of the staff elements have some environmental planning and oversight responsibility. These positions must be identified and their environmental functions integrated throughout the entire staff. This manual also outlines the Army's decision-making process.

- FM 34-130, *Intelligence Preparation of the Battlefield*.²⁸ As explained in Part II of this paper, the IPB process needs to specifically include the investigation of environmental considerations.

Train and Educate the Force—Environmental Training

"Integration" is the philosophy used in designing environmental training programs. Rather than developing stand-alone courses, the Army integrates environmental considerations into all levels of existing training.

Individual and Collective Tasks

The Army is striving to integrate environmental considerations into military occupational skills (MOS) training. Integration is more urgent for some skills than others. For example, fuel handlers, heavy equipment operators, mechanics, and heavy weapons handlers require immediate attention. To meet this need, the Army established an environmental work group composed of members from its service schools. The work group representatives ensure environmental training is incorporated into their school's training programs and doctrinal manuals.²⁹

The integration efforts of the Combined Arms Support Command (CASCOM), a member of the TRADOC Environmental Work Group, are a major success story. CASCOM is responsible for the service support branches, including Quartermaster, Ordnance, Transportation, and Missile/Munitions Schools.

CASCOM recently released the Soldier Training Plan (STP) for MOS 77F, Fuel Handler. The potential environmental impacts from fuel handlers are obvious and CASCOM considered this when defining the tasks, conditions, and standards. Their new manual is an excellent example of how environmental considerations can be incorporated into operations without sacrificing mission accomplishment.³⁰

Resident Training:

To further support environmental education, the Army directed its service schools to include environmental instruction in their resident training programs. These resident courses range from initial entry (basic training) through the Sergeants Major Academy, and from officer precommissioning to precommand courses.³¹

The environmental instruction contains the baseline environmental knowledge that all soldiers of that rank will receive. The students must identify the Army and unit environmental programs, identify applicable environmental laws and Army regulations, describe soldier and leader duties, and develop the environmental ethic.

SUMMATION

The Army must be capable of decisive victory in full-dimensional operations. This encompasses employing all means available within the laws of war to accomplish any given mission, across the full range of possible operations, both in war and in military operations other than war.

The acceptable level of these impacts is not finite and will vary based on the intensity of the conflict. The Army applies the combat power necessary to ensure victory through an appropriate and disciplined use of force. The Army conducts warfare in accordance with international treaties, the rules of engagement, and guidance from commanders.

To minimize the collateral damage, the warfighting staff evaluates environmental considerations early in the decision-making process. The commander has the challenging task of weighing environmental considerations with other operational concerns.

The Army is integrating environmental considerations into training and doctrine. This begins by establishing an environmental ethic and an understanding of the laws of war.

A sound environmental ethic and specific doctrinal guidance will prepare our soldiers and leaders for operations in the 21st Century and the challenges it presents.

The Army faces a unique set of challenges as it adapts to a world that has changed more broadly and fundamentally than at any time since the end of WWII. The Army must continue to adapt to ensure success in a rapidly changing strategic

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environment. Now, more than ever before, it serves as a strategic Army, a land force on which the United States and its allies rely to meet global challenges.³²

Notes

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