

# Environmental Considerations in Military Operations



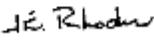
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BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS

  
J. E. RHODES  
Lieutenant General, U. S. Marine Corps  
Commanding General  
Marine Corps Combat Development Command  
Quantico, Virginia

By Order of the Secretary of the Army:

ERIC K. SHINSEKI  
*General, United States Army*  
*Chief of Staff*

Official:

  
JOEL B. HUDSON  
*Administrative Assistant to the*  
*Secretary of the Army*  
0014001

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## PREFACE

### PURPOSE

This field manual (FM) guides the United States (US) Army and the US Marine Corps (USMC) in applying appropriate environmental protection procedures during all types of operations. It also provides basic techniques and procedures for units at the company, battalion, and brigade/regiment levels. This manual states the purposes of *military environmental protection*, a description of legal requirements, and a summary of current military programs. It also describes the growing strategic significance of environmental factors in the twenty-first century. As a unit procedures manual, it describes how to apply risk management methods to identify actions that may harm the environment and appropriate steps to prevent or mitigate damage. Appendixes provide references, formats, practical applications, checklists for self-assessment, and sources of assistance.

### SCOPE AND APPLICABILITY

This doctrine applies to all Army and Marine Corps commanders and staffs (and other Department of Defense (DOD) units/staffs operating under their command authority) responsible for planning and executing operations. It applies to all soldiers and Marines as well-disciplined stewards of the natural resources of this country and protects, within mission requirements, the environment in every area of operations (AOs). For overseas theaters, this doctrine applies to US unilateral operations and US forces in multinational operations, subject to applicable host nation (HN) laws and agreements. Finally, it applies to support provided by the Logistics Civil Augmentation Program (LOGCAP).

### ★USER INFORMATION

Unless this publication states otherwise, masculine pronouns do not refer exclusively to men.

The short synopses of laws and regulations contained herein are meant to provide only a thumbnail sketch of the laws and regulations described and are not inclusive of all requirements.

This publication is intended only to improve internal management of the Army and USMC and is not intended to create any right or benefit, substantive or procedural, enforceable at law by any party against the US, its agencies, its officers, or any person.

The proponent of this publication is HQTRADOC. Send comments and recommendations on Department of the Army (DA) Form 2028 (Recommended Changes to Publications and Blank Forms) and forward it

directly to Commandant, US Army Engineer School, ATTN: ATSE-DOT-DI,  
320 MANCEN Loop, Suite 370, Fort Leonard Wood, Missouri 65473-8926.

## INTRODUCTION

The military's primary mission is to win this nation's wars through the application of overwhelming combat power. Warfare, by its very nature, is destructive to humans and their natural environment. Environmental damage is a consequence of combat. However, the commander in the field is often required to restrict the application of force. He must conform to the law of land warfare: those written and unwritten conventions and customs that protect against unnecessary suffering and facilitate the restoration of peace. He is, with increasing frequency, constrained by mission requirements that may restrict the use of much of the combat power inherent in his organization.

The US military has historically exercised restraint, even in general war. For example, during World War II in Europe, the military was ordered to limit damage to works of art, churches, monuments, archives and libraries, whenever possible, without endangering troops or mission. Field commanders incorporated this information into their standard decision-making process and made judgments based on military necessity. As the military looks into the next century, and even today, military units should try to avoid unnecessary environmental damage, not only in training, but also across the spectrum of operational missions. A mission's success may be determined by political or socio-economic stability, both of which are affected by environmental factors and resources. The Army and USMC must be able to identify ways to protect the natural environment while executing the full range of their missions by doing the following:

- Considering the environment in planning and decision-making in conjunction with other essential considerations of national policy.
- Protecting the environment of home stations and training areas as a means of retaining resources for mission purposes.
- Using environmental risk assessment and environmental management principles to integrate environmental considerations into mission performance.
- Instilling an environmental ethic in soldiers and Marines.
- Understanding the linkages between environmental protection issues and their associated impact on safety, force protection, and force health protection.

*Military environmental protection* is the application and integration of all aspects of natural environmental considerations, as they apply to the conduct of military operations.

The above actions identify environmental protection as an important undertaking to be considered in conjunction with mission planning and execution. Through planning and execution, the Army and Marine Corps include environmental considerations and address them appropriately across the entire spectrum of operations.

## **FUNDAMENTAL CHANGE**

Military actions, at the dawn of the twenty-first century, are undergoing revolutionary changes in methods, weapons, and even strategic objectives. Extraordinary advances in technology accompanied by a historically unprecedented growth in global population have dramatically altered the characteristics and demands of the battlefield. Soldiers and Marines must be prepared to respond across the “entire operational spectrum, from humanitarian to combat” and the four operational categories (offense, defense, stability, and support operations), sometimes within the same operation. Deployed forces must be able to conform to the environmental protection requirements of the theater commander without impairing combat effectiveness.

This requirement is new and fundamentally different from the traditional, organized application of violence that is the core of military capability. It stems from mankind’s capacity to cause irreparable harm to vital natural resource systems and our growing understanding of the consequences of such damage. The environmental resources of these natural systems, such as clean air, water, land, forests, and wildlife, were once considered limitless. Today, it is clear that these resources are limited and require protection. Where they are scarce, they are increasingly significant to economic well-being and human health.

In regions where increasing numbers of people occupy a finite and densely crowded area, urbanization, migration, public health, and refugees are factors of growing strategic importance. In these circumstances, environmental resources may assume a substantial role in conflict origin and resolution. US land forces will increasingly operate in, or near, urban environments. For example, US forces may conduct stability operations and support operations (FM 100-5) to establish order in the aftermath of an insurgency or civil war, a failed government, or lawlessness. Shortages of basic resources such as clean water, food, and fuel will complicate the mission. Thus, environmental resources can be operational, as well as strategic, factors.

United States land forces must be versatile and capable of rapid deployment to perform the full range of missions from humanitarian to total war. Recent operations have shown that they must also be flexible within the strategic or operational mission. For example, units may execute combat operations, limited in time or space, within the context of larger stability operations. They must also be able to apply environmental protection measures appropriate to the situation.

National recognition of environmental threats to the population’s safety and well-being has inspired laws, regulations, and international agreements.

American citizens value and demand a clean and healthy environment. US military forces do not function independently of political policy and the desires of the people; they reflect national values and obey the laws. Therefore, the US military have developed skills and programs for environmental protection.

Integration between civilian and military application of environmental protection is essential. This manual devotes itself to demonstrating how this integration can be relatively seamless as it melds into the existing processes within the Army and Marine Corps. Integration of *military environmental protection* is an evolutionary, rather than a revolutionary adaptation of our current military processes. The concept must become second nature for each soldier and Marine. Linking good environmental actions to sound tactical doctrine and tactics, techniques, and procedures (TTP) can and should be the standard. Environmental considerations will, in many cases, reinforce or amplify sound tactical principles and issues of force protection that the military already accepts as doctrine or TTP for other reasons. *Military environmental protection* is tied directly to risk management and the safety of soldiers and Marines. It is an enabling element for the commander, and as such, an essential part of military planning, training, and operations.

## HOW TO USE THIS MANUAL

The sequence of chapters in the manual are set up to help you understand what *military environmental protection* is and how to apply it by providing:

- General knowledge.
- Planning guidance.
- Training guidance.
- Operations guidance.
- Guidance on how to interface with the installation and respective staff positions.
- Guidance on establishing and assessing a unit program.
- Guidance on the impact of environmental conditions on the health of service members.

The appendixes provide a more in-depth look at information that supports the chapters. In general, they are designed to provide a starting point or template for the products that soldiers and Marines will require as they build their unit program and operate during planning, training, and all operations across the spectrum of conflict.

## Chapter 1

# Environmental Protection and Military Operations

*“An emerging class of transnational environmental issues are increasingly affecting international stability and consequently will present new challenges to US strategy.”*

National Security Strategy, July 1994

The US military’s primary mission is to defend the US—its people, its land, and its heritage. National security strategy now includes specific environmental security concerns. Strategic and operational end states support lasting victories. End states include environmental components. Additionally, the American people expect the Army and Marine Corps to manage the financial, human, and natural resources entrusted to them in a responsible manner. The policy and vision of the Army and Marine Corps on these issues, as well as your responsibilities as leaders, are critical to understanding how to address *military environmental protection*.

## BACKGROUND

1-1. Strategic factors influencing international security and stability have dramatically changed. Global population and industrial activity have grown geometrically, and technological advancement has accelerated. These phenomena have begun to shift the foundations of strategic analysis, fundamentally altering the relationships between the human population and the supporting natural resources. *Operational Terms and Graphics* (FM 101-5-1/MCRP 5-2A) defines the natural environment as “the human ecosystem, including both the physical and biological systems that provide resources (i.e., clean air, clean water, healthy surroundings, sufficient food) necessary to sustain productive human life. Included in the natural environment are manmade structures, such as water and waste water treatment facilities and natural/cultural resources”.

## CONTEXT OF ENVIRONMENTAL PROTECTION

1-2. Conflict caused or aggravated by resource scarcity is not new. What was once a local or regional problem may now extend globally. Resource scarcity could reduce the ability of governments to respond to the basic needs of their people. The resulting instability can threaten regional security and lead to armed interventions.

## ENVIRONMENTAL RESOURCES AS A CAUSE OF CONFLICT

1-3. Strategic resources (i.e., minerals, oil, or coal) have often been catalysts of conflict. The widespread distribution and product substitution associated with a global economy tend to mitigate scarcity. Renewable or “sustainable” resources—such as clean air, water, croplands, or forests—are more difficult to replace and can be a regional catalyst of instability.

1-4. Environmental degradation, natural disasters, famines, health epidemics, and changes in climate can threaten a nation’s economy and send populations across borders as refugees. For example, construction of a series of dams on the Senegal River made river-bottom farmland suitable for high intensity agriculture. Mauritanian Moors abandoned cattle production in their degraded grazing areas to migrate to the river valley where a struggle ensued over the farmland. In a similar situation, soil degradation and population growth in Chiapas, Mexico generated peasant migrations to upland hillsides. Population overload, combined with the lack of capital to protect the local ecosystem, caused severe environmental resource scarcity.

1-5. In both examples, environmental resource scarcity, caused by degradation or depletion of renewable resources, encouraged groups to capture these resources or migrate to find adequate resources. Environmental resources can contribute to the potential for conflict when they become environmental threats or strategic goals.

### Environmental Threats

1-6. Environmental threats intensify regional instability. In Haiti, dwindling resources were central to the social collapse of the island nation. Almost totally deforested, its poor croplands were divided into smaller and less productive parcels with each generation. Haiti’s population of seven million, already unsustainable by every measure, is expected to double in the next 18 years.

1-7. Environmental threats to stability and security might result from acts of war or terrorism (i.e., the destruction of infrastructure facilities providing water or fuel). The threats (i.e., polluting the rivers or air that flow into another country) may also result from the routine activities of an industrial society.

1-8. The actions associated with developing a national infrastructure, such as building a dam, which cuts off water to downstream neighbors, may contribute to regional instability and conflict. Regional environmental threats can trigger events leading to conflict or deepening poverty. These types of situations encourage citizens to seek violent solutions.

1-9. Security from these environmental threats includes protective measures for natural resources; safety measures for soldiers/Marines whether at home station or deployed; and offensive, defensive, and support actions when required to meet national security goals. Environmental threats will confront theater commanders in the form of natural resource issues as strategic and operational factors before, during, and after future conflicts.