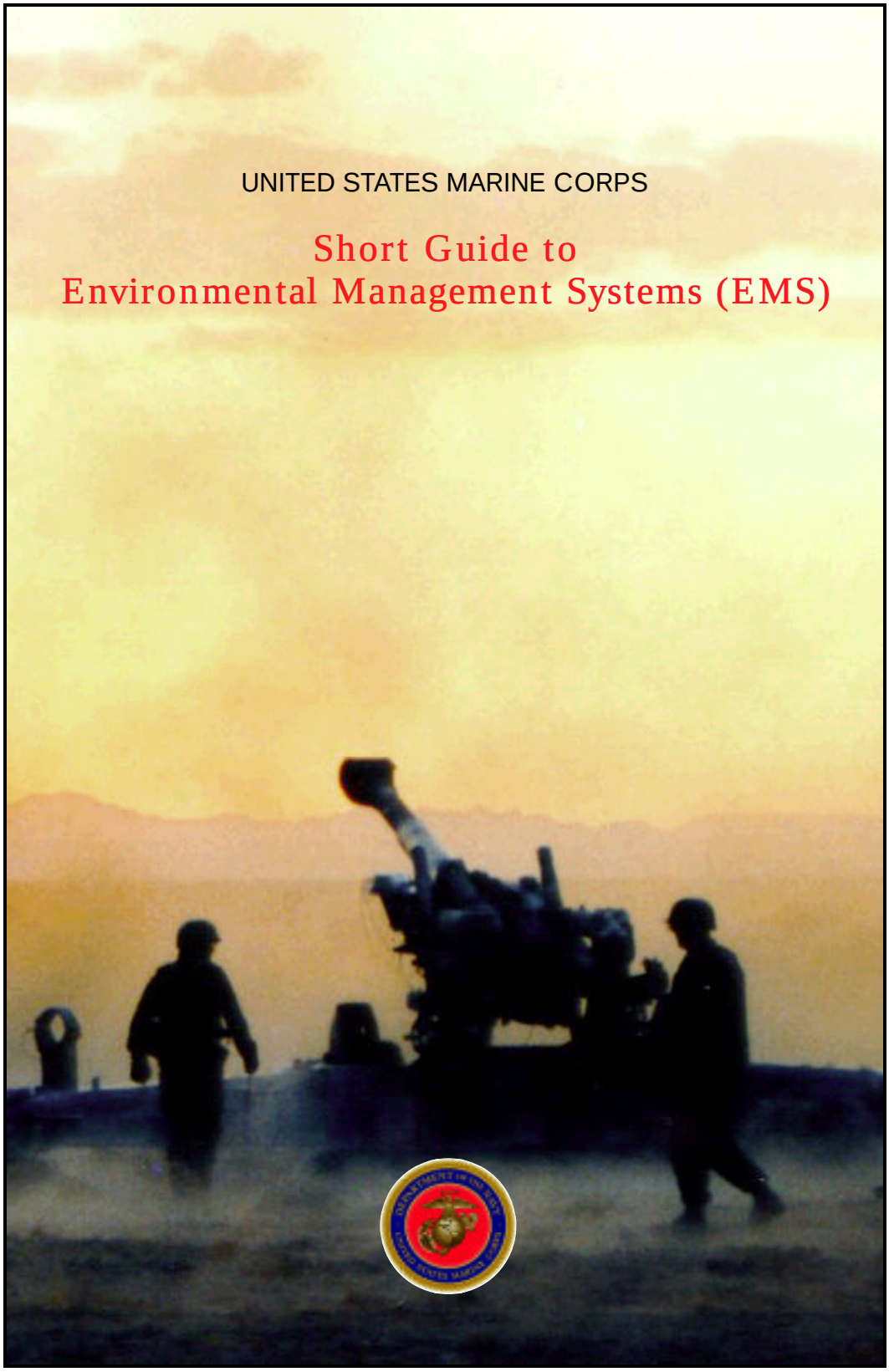
UNITED STATES MARINE CORPS

Short Guide to Environmental Management Systems (EMS)



PURPOSE OF THIS GUIDE

This short guide provides USMC environmental managers information needed to improve the effectiveness of existing environmental programs through implementation of an environmental management system (EMS).

WHAT IS AN EMS?

An EMS is a systematic approach to ensuring that environmental activities of an organization are well managed and continuously improving. The strength of an EMS is in its systematic approach. Once the system is implemented, it will function independently of personnel turnover; i.e., it is not personality-driven.

Under the EMS, environmental management is integrated into the overall way of doing business. Environmental requirements are incorporated into operational and management decisions through cross-functional coordination and integrated planning.

This systematic quality approach to environmental management meets environmental requirements by:

- Assessing operational and management **practices** and their **impacts** on **resources**, including mission effectiveness;
- Ensuring the environmental programs are "self-correcting;" and
- Committing to compliance, pollution prevention, and continual improvement of the environmental program.

In short, an EMS is the system that enables planning, implementing, evaluating, and improving the installation's environmental program. At USMC installations, environmental programs implemented in accordance with requirements of MCO P5090.2A are basic EMSs.

GOALS OF AN EMS

A minimum performance standard for an EMS is compliance with all pertinent environmental requirements.

Additional goals of an EMS include:

- Sustaining mission readiness through improved compliance, and business effectiveness and efficiency.
- Committing to continuously improving operational effectiveness and efficiency and the EMS itself.
- Reducing the time required to bring new personnel up to speed and to "run" the environmental program at the shop level.

- Improving competitive advantage for working capital fund activities.

To achieve these goals, an EMS should:

- Define, characterize, document, and prioritize resources, practices, and impacts.
- Minimize impacts on resources by improving or eliminating inefficient practices.
- Promote ownership of liabilities and distribute environmental awareness and accountability to process owners where feasible.
- Identify causes of non-compliance and implement solutions that prevent recurrence installation-wide

CURRENT INITIATIVES AND EMERGING REQUIREMENTS

DoD is currently evaluating potential benefits of EMSs as well as costs, barriers, and implementation methodologies. Current DoD initiatives include:

- Developing EMS policy based on the EMS pilot study conducted over the last two years. The policy will likely encourage the implementation of EMS principles at DoD installations, although precise directions regarding the adoption of an EMS standard are unclear at this time. HQMC is participating in this effort.
- Tracking a draft Executive Order (EO) on environmental management that will require Federal agencies to implement EMSs "based on [EPA's] Code of Environmental Management Principles for Federal Agencies and/or other appropriate, existing environmental management systems standards." The EO will also require installations to:
  - Develop and annually review and update measurable environmental goals, objectives, and targets; and
  - Incorporate the EMS review into existing audit protocols.

EMS PRINCIPLES AND STANDARDS

Organizations throughout the Federal sector are currently reviewing and/or implementing several EMS frameworks, including:

- EPA's Code of Environmental Management Principles (CEMP)[1],
- The ISO 14000 series of standards[2], and
- The Navy's Environmental Quality Assessment Program[3].

1 For information on CEMP, see http://www.epa.gov/oeca/cemp/.

2 For information on EMSs, ISO 14000, and related DoD initiatives, see http://www.denix.osd.mil/denix/DOD/Library/ISO14000/iso14000.html.

3 For information on the EQA program, see http://206.5.146.100/n45/branch/n457/eqa.html

These frameworks have much in common. HQMC analyzed these and other EMS frameworks and identified three processes that are fundamental to a "generic" EMS: the planning loop, the corrective action loop, and the continuous improvement loop. These processes are "loops" in that they should be conducted repeatedly. The figure on page 4 illustrates the loops and their relation to each other.

MCO P5090.2A addresses these loops to some extent; thus, installations that comply with MCO requirements already have a basic EMS in place. There is, however, room for improvement.

Planning Loop

The most efficient EMS focuses resources where they are most needed. A comprehensive inventory of regulatory requirements, business and management practices, and the relative impacts of its practices on the environment and other vulnerable resources will enhance an installation's understanding of where to apply resources.

Identified practices, resources, and impacts should be rigorously documented to provide a basis for the remaining planning loop activities, which include:

- Identifying applicable regulatory and policy requirements;
- Identifying P2 opportunities;
- Prioritizing impacts; and
- Developing objectives and targets based on prioritized impacts.

Since business and management practices at Marine Corps installations are subject to the dynamics of mission, funding, personnel, and environmental requirements, the planning loop should be repeated periodically to ensure the EMS remains effective.

Corrective Action Loop

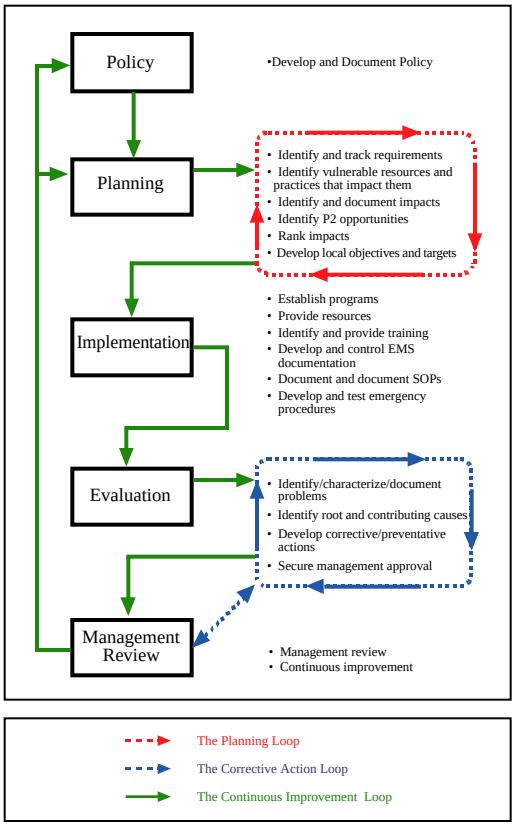
An installation's environmental program becomes "self-correcting" when it aggressively identifies compliance problems and then develops and imple-

ments effective and permanent solutions. Root cause analysis and other problem solving techniques are key to successfully operating the corrective action loop.

Continuous Improvement Loop

Continuous improvement in environmental performance, including meeting objectives defined in the planning loop and optimizing the EMS, is an underlying goal of an EMS. The continuous improvement loop contains both the planning and corrective action loops, as well as other key elements, including:

GENERIC EMS PROCESS



- Developing and documenting environmental policy to provide vision or direction and to articulate basic performance goals.
- Implementing a program to achieve the environmental policy:
  - Appoint personnel with defined roles, responsibilities, and authority for establishing and sustaining the EMS;
  - Provide resources to address financial, technical, training, material, and other requirements;
  - Document key elements of the EMS and maintain environmental records; and
  - Develop written procedures and operating criteria for all practices with impacts identified in the planning loop.
- Periodically reviewing the EMS at the top management level.
- Improving the EMS by revising policy, plans, procedures, and objectives / targets based on management's review.

USMC EMS INITIATIVES

Gap Analysis and Roadmap

HQMC conducted a gap analysis comparing the ISO 14001 standard with MCO P5090.2A and higher level planning documents. Results included a roadmap for EMS planning and implementation in the Marine Corps and a sample Environmental Compliance and Protection Standard Operating Procedure (ECPSOP).

Camp Lejeune EMS Pilot Study

MCB Camp Lejeune is participating in DoD's EMS Pilot Study assessing the relative merits and costs of EMS implementation at DoD installations. Camp Lejeune is also participating in EPA's EMS Multi-State Working Group. HQMC has been an active participant in both studies.

ECE Program Improvements

HQMC has enhanced the USMC ECE Program by including protocols to evaluate installation compliance with environmental management requirements of MCO P5090.2A and incorporating root cause categorization procedures.

Draft USMC EMS Policy

HQMC is currently developing Marine Corps policy on EMSs, which will be consistent with DoD's policy. HQMC is also currently developing procedures and tools to assist planning loop activities.

THE MARINE CORPS EMS

MCO P5090.2A provides the framework for the USMC EMS. Installations should implement requirements of the MCO, addressing local conditions, through publication of ECPSOPs and Base / Station Orders. In addition, installations should consider other elements of the generic EMS, such as:

- Inventorying resources, practices, and impacts to:
  - Prioritize environmental impacts and minimize or eliminate impacts through effective allocation of resources;
  - Distribute environmental responsibility and accountability across functional boundaries, with particular emphasis on process owners; and
  - Facilitate identification, cause analysis, and correction / prevention of compliance and management deficiencies.
- Developing local goals and objectives; and
- Documenting the EMS.

Since USMC installations vary in size, mission, and available resources, and installation environmental programs vary in maturity and performance, each EMS should be tailored to local conditions, needs, and management structure.

HQMC will not provide funding for third party EMS certification. Installation staff familiar with local conditions, organizational structure, and the installation's environmental program should develop the EMS.

WHAT NEXT?

Pending final EMS policy from DoD and HQMC, installation environmental planners can begin taking steps towards EMS planning and implementation. The following are suggested early initiatives:

- Track emerging DoD and USMC policy and the environmental management EO.
- Obtain EMS training.
- Appoint an EMS manager.
- Implement all "EMS" requirements of the MCO.
- Brief the CG / CO and solicit command support.
- Begin inventorying resources, practices, and impacts.
- POM for EMS implementation.

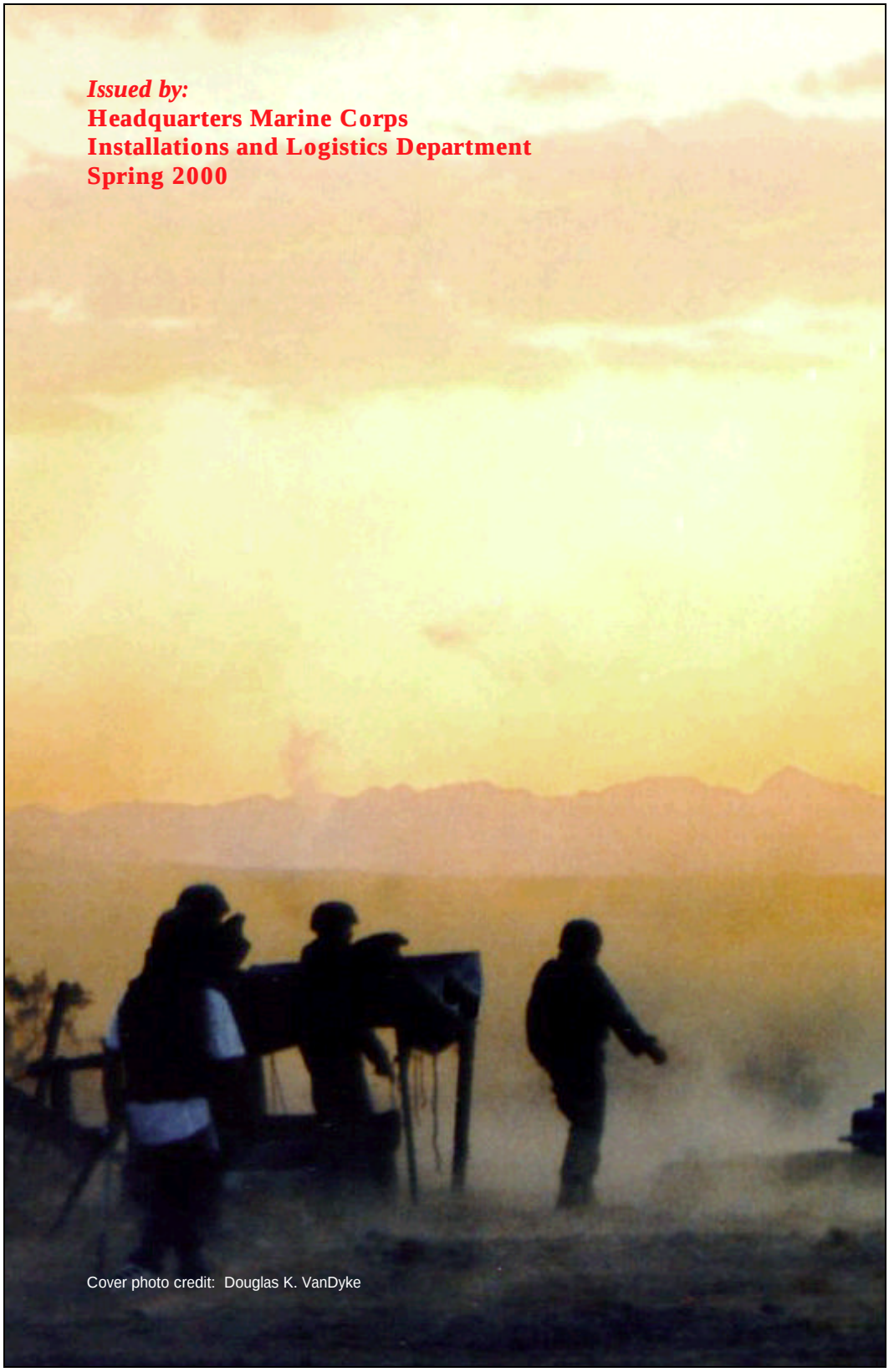
KEY TERMS

Practices are activities conducted at the installation that, in normal or abnormal operating conditions, cause or may cause impacts to resources. Practices include both business practices (practices that directly support mission) and management practices (those that provide for the control of business practices).

Resources include environmental resources, but may also encompass other assets deemed important to the installation, such as cultural and historic areas, training areas, health and safety of personnel, real property, the installation's public relations status, and general fiscal effectiveness. Ultimately, all resources and practices support the missions of each installation and the Marine Corps as a whole.

Impacts are the effects of practices on resources.

Process owners are persons, units, or organizations that operate, conduct, control, or are otherwise responsible for practices. Process owners are generally not the installation's environmental management staff.



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