

ENVIRONMENTAL IMPACT ASSESSMENT

A Guide to Best Professional Practices



CHARLES H. ECCLESTON



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Dedication

This book is dedicated to Alice and Brandie, who have been my inspiration.

Acknowledgments

I am indebted to the professional practitioners who reviewed and provided comments on this book. Although space constraints make it difficult to mention all individuals by name, I would like to call attention to the following professionals.

I am indebted to Peyton Doub, a seasoned NEPA practitioner and close associate, who reviewed Chapter 1 (“Cumulative Impact Assessment: A Synopsis of Guidance and Best Professional Practices”) and Chapter 6 (“Environmental Management Systems”).

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Introduction

Under the best of circumstances, environmental impact assessment (EIA) can be a complex and challenging task. Experience indicates that the scope and quality of such analyses varies widely throughout the U.S. as well as internationally. This book integrates five distinct yet interrelated themes into a single comprehensive framework for practitioners:

- Cumulative impact assessment
- Preparing greenhouse emission assessments
- Preparing risk assessments and accident analyses
- Social impact assessment and environmental justice
- The international environmental impact assessment process guiding principles

This book also describes the ISO 14001 environmental management system (EMS) and explains how it can be used to implement decisions that result from the aforementioned assessments; direction is provided for integrating the EMS with an international EIA process and the goal of sustainability. The thrust of the book is to provide practitioners and decision makers with *best professional practices* (BPP) for preparing such analyses. The aim of this book is to provide the reader with a balanced skill set of concepts, principles, and practices for these assessments. This book is unique in that it focuses on providing practitioners and decision makers with state-of-the-art tools, techniques, and approaches for resolving environmental impact assessment problems.

While the book references the U.S. National Environmental Policy Act (NEPA), most of this guidance is generally applicable to any international EIA process consistent with NEPA. A sixth and final chapter provides direction for developing a comprehensive Environmental Management Systems which can be used to monitor and implement final decisions based on such analyses.

Black Swans

Nassim Taleb developed the theory of Black Swan events. Taleb developed the theory to explain: 1) potentially rare but catastrophic, and difficult to predict events that lie beyond normal expectations and (2) the psychological biases that tend to blind people to the possibility of such uncertain events. A good example of a Black Swan event was the Deepwater Horizon drilling rig blowout. It was indeed difficult to predict every decision or event that led to one of the worst environmental disasters in modern history. Many critics charge, "What in the world were they thinking!" In hindsight, it is easy to claim that this disaster was predictable. In reality, it was not for this was a Black Swan event because it was extremely rare and not easily predictable with any degree of reasonable certainty.

The sequence of events that create routine environmental problems tend to be quite predictable, and are, therefore, termed White Swans. While most environmental White Swan events do not attract international attention, they can nevertheless cost millions of dollars in damage and fines, lead to loss of life, and ruin local ecosystems, to say nothing of ruining careers. Environmental catastrophes can still occur because there may be a near total absence of information that defines the ramifications of specific substances or operating practices that later turn out to be very harmful to the environment.

In the Deepwater Horizon, much of the BP blowout leak was simply due to a limited understanding of the limitations of shutoff equipment mounted one mile below the surface of the ocean. However, White Swan events involving more mundane or routine environmental issues are typically the result of a lack of awareness, inattentiveness, sloppiness, or trying to shortcut the safety/environmental process to save time or money. In such cases, a single or select few individuals are viewed as the "environmental people" and employee training is limited to the absolute basic elements; senior managers may feel unable to step in for fear of suffering serious career ramifications; the focus is frequently on complying with minimal environmental regulations rather than carefully planning out and considering all potential concerns. When an accident occurs, the innocent may be fired or demoted to demonstrate that swift action was taken to prevent a future event.

Both Black and White Swan events often have the underlying theme of a lack of cohesive leadership either just before the event or in the wake of the resulting crisis when everyone is panicked and responding to the event. Environmental departments routinely deal with a broad and cross-cutting array of departments. Environmental managers are often perfectly positioned to see the warning signs and to assume the leadership necessary to prevent such an event. Most importantly, they are in a

unique position which exceeds the simpler task of day-to-day environmental auditing, inspections, and environmental compliance. They are in a position to perform detailed analyses of potential scenarios and their impacts, and to develop plans and mitigation measures for dealing with them should they occur. It is partly for this reason, that that this book has been written. This book is designed to provide environmental managers and analysts alike with assessment tools necessary for assessing and developing plans that will prevent not only White Swans, but Black Swan events as well.

The Legal Circle

To a large extent, the modern environmental movement was driven by public anger which led to enactment of strict laws and regulations and, inevitably, litigation.* Lawyers that helped to lead this movement were an idealistic breed. In their defense, corporations started hiring lawyers to address regulatory compliance issues and potential liability. This new generation of lawyers has become part of the business establishment. These corporate lawyers tend to view environmental compliance in terms of promoting the interests of the organizations that hire them. Virtually every company claims to be pursuing the goal of sustainable development future, while at the same time employing armies of lawyers to protect their interests.

Corporate managers and staff are being cautioned to carefully review memos and e-mails that may have even a remote possibility of being “discovered” as part of a lawsuit. Environmental, health, and safety (EHS) managers attend training classes which teach them how to think like lawyers. But this can also result in negative implications. While a manager may take the position of “remaining silent,” minimizing important communications — this can also result in negative effects such as failure to communicate potential risks.

Many lawyers view their role as investigating every conceivable legal avenue to represent their clients and to minimize risks to the client. Juries are left with the complicated process of trying to sort out the facts and reach a conclusion. Attorneys are masters at manipulating juries and acquitting guilty defendants who then go on to commit even more heinous crimes. These lawyers are skilled at exploiting legal loopholes. One of the revelations that came out of the BP Deepwater Horizon oils spill was that those in charge of making decisions and oversight had not equipped the rig with a second, backup device intended to cut off the flow of oil from a well in case the blowout preventer failed.

* This article was inspired by an article by Richard MacLean, *Environmental Quality Management*, 117-123, Autumn 2010.

While such redundancy is common on new drilling rigs, it was not required under U.S. law so BP claims that they were in compliance with U.S. requirements. Unfortunately, this fact does not matter to the public. As a result, many attorneys may advise their clients to adopt the most expensive and conservative technologies and practices all the time, in all instances. But this is not necessarily a desirable outcome either. Managers may simply err on the most conservative side of every decision, dramatically reducing future business ventures. History has shown time and again that some of the most successful development projects were the result of corporations taking risks and bold actions.

An attorney-dominated organization can be at peril when attorneys are granted too much control. The decision-making process can become corrupted where an organization's attorneys act to block access to upper management in an attempt to shield leaders from liability. In addition to listening to their attorneys, managers must also consider common industrial practices, and consider what the moral and ethically right thing to do is.

Organizational ethics are frequently interpreted within the narrow confines of existing regulations. This is particularly true of an area like sustainability where opinions vary widely. Green marketing has become very popular of late. Commitments are typically steeped in dazzling terms such as future benefits. One is left to wonder how these core principles are truly integrated into day-to-day operations. Organizational lawyers are often playing an integral part in such marketing.

This brings us back to the lawyers that had much to do with initiating the modern environmental movement. While some lawyers led this movement, many now specialize in circumventing environmental health, safety, and environmental quality; they counsel managers on how to protect their organizations while wreaking havoc on the environment. So we have come almost full circle. As one lawyer commented, the best business lawyers think like business managers and thus are not risk averse.

However, there is another avenue available to government and business for reducing risks; this approach can optimize decision-making while circumventing many of the chaotic and paradoxical legal dilemmas just described. This avenue involves preparing scientifically-based assessments which objectively evaluate decision making in terms of potential impacts, risks, and reasonable alternatives to what may be a standard or traditional course of action. Properly prepared, such assessments can provide managers and decision makers with a powerful tool for balancing the risks and impacts against more traditional factors such as cost and schedules. It is with this thought in mind that this book has been written.

Audience

This book is designed for use by practitioners and decision-makers who are faced with the challenge of preparing complex EIAs. The book is also aimed at professionals in government and consulting, and those in the private sector who are involved in some way with preparing NEPA or EIAs, and who seek to master this subject. If you have technical questions or issues, or need assistance, you may contact the author at Eccleston@msn.com.

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