

Introduction

Human activity has been altering—for better and for worse—natural environments for thousands of years. Beginning several decades ago societies decided that they wanted a better understanding of human interactions with other species and the abiotic environment. Out of this concern have come laws and regulations requiring the evaluation of potential environmental impacts caused by continuing and new human activities. While science plays a role in the evaluation, the criteria by which activities are judged are those that reflect the societal values of the regulating jurisdiction. These governments, and other environmental impact assessment (EIA) professionals, need practical and effective tools in order to be effective.

There is a hierarchy which can be used to organize the practical application of these tools. At the top of this hierarchy is environmental risk management. Beneath that are levels of environmental management systems, regulatory oversight and approval, compliance assurance, violation enforcement systems and reclamation activities (which include remediation, enhancement and creation, among others). Environmental risk management is a process to guide businesses through the potential uncertainties of environmental laws and regulations. This includes bringing all their facilities and operations into compliance with existing regulations, maintaining full compliance, providing as much certainty and predictability as is possible under current conditions and planning for change. Governments, too, manage environmental risk through their statutory and regulatory programs. Envi-

Environmental management systems are the detailed implementations of the environmental risk management policies. Environmental impact assessments are usually part of the lower hierarchical levels, implemented by national, regional and local governments.

Environmental impact assessment have been statutory and regulatory requirements for businesses around the world for more than three decades. In the United States these assessments are required under the National Environmental Policy Act (NEPA) in the form of Environmental Assessments (EA) and Environmental Impact Statements (EIS). At the state level assessments may also be required regardless of whether a major federal action that triggers NEPA compliance is involved. Washington State has its State Environmental Act (SEPA), Oregon has its Statewide Planning Goals (in particular, Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces) and California has its California Environmental Quality Act (CEQA). Other states have their environmental assessment laws and regulations, too. These regulations apply to industry (e.g., mining, forestry, electrical generation/transmission), commerce (e.g., transportation) and development by ports, resort operators, housing builders and others. In other countries there are equivalent national and subnational requirements for development and industrial projects.

No matter where the project is located or what it involves, there are a number of EIA characteristics and procedures with the potential to frustrate the various interests involved in the process. Too often the frustration produces contention which increases EIA cost and time without resolving or reducing the underlying concerns of all parties. One of the most important characteristics which creates the potential frustration elements is the inherently subjective nature of environmental impact assessments. Because societal values of significance and acceptability are impossible to measure objectively, decisions may seem arbitrary and capricious to groups who do not like the outcome. Much too frequently, these decisions end up in the legal system, where costs and time delays continue to accumulate while the subjectivity is not removed.

There are also real problems that arise during the environmental impact assessment process, and these may also lead to delays, increased costs, and dissatisfaction by one or more sides in the process. Examples of real problems are—