

Environmental Sensitivity Analysis in Organizational Sustainability Planning

Boosting Effectiveness through Shared Stakeholder Interests

Jane E. Obbagy

Organizations continually seek solutions to minimize vulnerabilities and uncertainties associated with their operations, physical assets, and processes. Those with the most effective approaches systematically assess the probability and potential severity associated with continuity risks, ranging from specific concerns such as fires and electrical disruptions, to broader considerations such as environmental and social issues.

For those with assets located in non-urban locations, assessing the environmental sensitivity of these geographic areas provides useful insights for improving the management of sustainability initiatives. This assessment framework centers on two strategic dimensions that influence the outcome of environmentally oriented sustainability initiatives:

- 1) *The natural capital characterizing a geographic area*
- 2) *Stakeholder interests in preserving or using it for economic or social purposes*

Analysis of the input data will reveal potential relationships among the interests of industry, governments, customers, or other parties whom may not have been previously identified. Once identified, such connections can positively influence the anticipated outcomes of local sustainability activities, such as forming new types of partnerships to accelerate the use of best practices or strengthening positions to deliver greater impact. The environmental sensitivity framework is designed to clearly map the connections between natural capital and stakeholder interests, making the results of analysis simple to visualize and act on.

Assessment Framework

So how does it work? The data inputs for the analysis are highlighted in **Figure 1**. Through the use of organizational and local asset databases, an experienced professional can rapidly gather information about the natural capital characterizing different geographic areas where an entity has assets, including the range of stakeholders who have an organizational interest in the natural capital.

About the Author: *Jane Obbagy* is vice president of The Cadmus Group, Inc. She manages the firm's international development activities—including environmental stewardship and risk assessment—and private-sector efforts to foster responsible corporate governance and strategy. This article is based on work Ms. Obbagy completed for an extractive industries client. Learn more at www.cadmusgroup.com.

Contact: jane.obbagy@cadmusgroup.com | (617) 673-7178

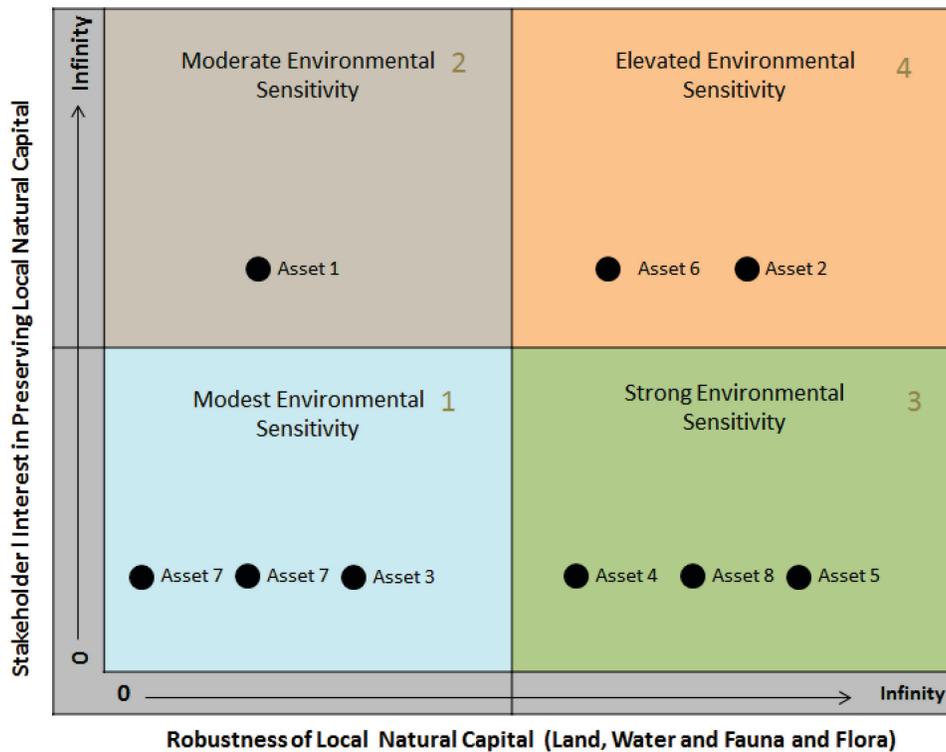


Figure 1. Environmental Sensitivity Data Inputs

Natural Capital	Stakeholders	Stakeholder Interests
<ul style="list-style-type: none"> National parks, national natural areas, and national forests Local parks, forests, and natural areas Indigenous reserves Protected areas such as bird sanctuaries or private bird or land reserves Wetlands/swamp areas Reservoirs and lakes Rivers with associated smaller rivers and tributaries Biological richness and/or the density of species including “hot spots” 	<ul style="list-style-type: none"> NGOs Citizens Tourists Suppliers Buyers Industry Associations Regulators Competitors Governmental Bodies Activities Industry Investors 	<ul style="list-style-type: none"> The types of impact funding being directed to preserve forests, coastal resources, wetlands, marine resources, biodiversity, and indigenous communities Indigenous communities utilizing the natural capital for food, shelter, and livelihoods The types of environmental regulations applicable to the preservation of natural capital locally and nationally The types of industries reliant on the natural capital such as tourism, lumber, fishing, and agriculture

When the input data are tallied and the results are mapped in a matrix format, the output is used to characterize the **environmental sensitivity** of the area in which the physical asset or operation resides (see **Figure 2**). In this system, *Elevated Environmental Sensitivity* areas are those characterized by an abundance of natural capital and a heightened level of public and governmental interest in preserving it. Areas characterized by *Strong Environmental Sensitivity* exhibit an abundance of natural capital and moderate organizational interest in preserving it. A *Moderate Environmental Sensitivity* area is one where natural capital exists and there is some organizational interest in preserving it, and *Modest Environmental Sensitivity* areas have limited natural capital and limited organizational interest in preserving it for economic or social purposes.

Figure 2. Environmental Sensitivity Analysis Matrix



So what does it mean? Under the environmental sensitivity analysis framework, an organization’s footprint incorporates not only its impact on the environment and its employees, but the degree to which all stakeholders influence the attainment of environmental sustainability goals. By understanding the geographic and societal context within which a given asset exists, an organization can expand its knowledge base when identifying strategies to focus on at the local level or how it will use its financial and human resources more effectively.

Sensitivity Analysis: Illustration

Areas with differing levels of environmental sensitivity will warrant different ranges of action to address the many potential sustainability options open to the organization and its community. **Table 1** provides examples of strategic roles an organization might want to consider when refining sustainability undertakings to improve program performance and outcomes in areas characterized with a moderate to elevated environmental sensitivity.



Table 1. Examples of Environmental Sensitivity Analysis Outputs

Strategic Role	Value and Potential Benefits
Program Optimizer	Strengthening an asset’s position with local natural capital stakeholders and coordinating data gathering may provide more information about progress being made in areas such as ecosystem services, environmental restoration efforts, or community development program relative to current internal practices.
Environmental Steward	Fostering dialogue among local natural capital beneficiaries may improve an asset’s long-term business, organizational, and sustainability strategies through the identification of new collaborators that have an interest in preserving the intrinsic nature of national parks, bird watching activities, or water resources for economic benefits related to tourism, fisheries, and agricultural businesses.
Sustainability Trainer	Previously unrecognized mutual interests may exist among the various players in the geographic area suggesting new opportunities for strengthening local and national capacity for ecosystem management and improving results through training, increasing local access to information on environmental “public goods” or identifying new local community leaders.
Efficient Risk Modeler	Previously unrecognized mutual interests may exist among the various players in the geographic area representing additional opportunities for gathering information and modeling potential risks associated with water storages, climate change and growth among all geographic interests.
Regulatory Advocate	Working with governments and local organizations to develop local ecosystem services guidelines or regulations may provide a greater return on investment in comparison to internal activities focused on preventing deforestation or loss of agricultural production, etc.

In many ways, the sensitivity analysis is a window into the complexity of risk management and sustainability strategies. Competing local stakeholder interests may affect the success of internal environmental stewardship activities focused on such diverse and resource-intensive concerns as biodiversity, indigenous peoples, water scarcities, and strengthening local capacity for ecosystem management.

The analysis can also enable the identification of a broad number of sustainability activities that augment, replace, or change the direction of existing programs. For example:

- As an **environmental steward**, an organization recognizes that the local fishing industry needs clean water to sustain the stocks. Since clean water is an important global goal as well an organizational goal, leadership decides to provide support to local forest owners to reduce the pressure on them to sell the land for other purposes that may create siltation issues impacting fish stocks.
- A company's employees are concerned about potential environmental/pesticide issues associated with agricultural activities occurring along the perimeter of the site. As a **sustainability trainer**, the company decides to work with NGOs and local educational institutions to support awareness-raising campaigns that promote environmentally sound agricultural practices within the local agricultural sector to help sustain the environment and address employee concerns.
- As a **program optimizer**, the organization decides that by working through a local community group it can support improved land management practices that in turn help increase forest regrowth, watershed capacity, and carbon sequestration that when combined with its own low emission development efforts demonstrates greater climate change results.

By tackling sustainability issues in partnership with other local stakeholders, organizations can increase the potential positive impact of their activities on the environment beyond the impact of individual efforts. The approach also builds trust with communities, regulators, and stakeholders by demonstrating that an organization's sustainability efforts are genuine and connected to core values such as integrity and commitment to social well-being. These types of collaborative efforts will be noticed by NGOs, governments, customers, regulators, the business community, media, and stakeholders that study organizations' non-financial output.

Being Bold, Yet Wise

Organizations face a wide range of choices in the design and implementation of a sustainability program. To ensure successful implementation and long-term value, it is imperative that the design be flexible, straightforward, and reflective of users' input. Moreover, establishing a robust program comes through systematic execution over a series of years as data are gathered, insights gained, and learning applied to revise and update program activities.

Environmental sensitivity analysis provides a platform for identifying different strategies for achieving sustainability goals at the local level, and may also serve as a tool to navigate internal conversations about the direction or focus of sustainability programs.

The range of strategic directions revealed through the environmental sensitivity analysis may mean taking on risk by building coalitions composed of diverse groups of actors or creating alliances among constituencies who don't usually work together. It may also mean recognition that complex challenges need interconnected solutions to scale programs for impact or that a more organized response to ecosystem management is warranted.