

## Sample of Introductory Text from *A Niche for Humans*

### BEFORE EDITING

#### INTRODUCTION: ABOUT THIS BOOK

*We can never solve our significant problems from the same level of thinking we were at then we created the problem.* - Albert Einstein

Can humans manage ecosystems, the environment or the biosphere? No, not directly. The complexity and nature of reality prohibit management that seeks to control, dominate or design. Ecosystems are no exception.

What we *can* manage is *our* interactions, influence, and relationships, whether they involve an ecosystem, another species or the biosphere. Ecosystems and other living systems respond to influence and will respond to human attempts to fit in. This form of management involves self control expanded to the species level. Such management (systemic management) has a broad set of objectives with the primary goal being that of finding a way for humans to be sustainable - finding our place in the universe. This includes striving towards an end in which ecosystems and the biosphere can support participation by a variety of species, including humans, while posing a minimum of risks.

This book presents systemic management as an implementation of the combination of tenets of management developed in the last several decades (Appendix 1.1). The chapters ahead define science and research that reveal the information needed for guiding management. Examples of systemic management will emphasize that sustainability includes the matter of *being* a successful species.

Being a successful species, however, is a complex matter. Complicated relationships with our environment include countless interactions with other species. But relationships with our environment are also extremely important in the affairs of individual people. The decision making of management is carried out in the context of social, religious, political, ethical, racial, and economic factors. One of the main objectives of this book is to point toward the guidance we can use for achieving sustainable relationships between humans, ecosystems and the biosphere to promote implementation - actions and decisions made by people, institutions and society. The management we undertake must be in accord with the laws of nature, including those that apply to the biological systems of which we are a part and involve time scales we ordinarily ignore. It includes what we do as individuals.

A quick review of the tenets of management listed in Appendix 1.1 raises more questions than are answered. How do we account for complexity or reality in what we do? How do we overcome the limitations of science to ensure that it is involved realistically? How can management be applicable to the biosphere, ecosystems, and species simultaneously? What parts of science are most useful or most important? How do we deal with human overpopulation? How overpopulated are we? How do we find uniformity in management when we are dealing with such varied issues as fisheries, parks, extinction, and pollution? Can we determine whether extinction or economics is more important in decision making? Can we assume that we are doing the right thing and simply need to do it better? Or do the failures of conventional forms of management lead us to needing an entirely new form of management? Is there science that will support a new form of management? What kinds of change do we need? At what level do we need change?

## Sample of Introductory Text from *A Niche for Humans*

### AFTER EDITING

#### SYSTEMIC MANAGEMENT - WHAT AND WHY?

*When we try to pick out anything by itself, we find it  
hitched to everything else in the Universe.*

- John Muir

Can humans manage other species, ecosystems, or the biosphere? No, not directly. Because of the complexity and nature of reality, management approaches that seek to control, dominate or design ultimately are doomed to failure.

What we *can* manage is *our* interactions, influence, and relationships with other species, biological communities, ecosystems, and the biosphere. This form of management, defined here as “systemic management,” requires self-control expanded to the species level. It has a broad set of objectives, with the primary goal of finding a way for humans to be sustainable – finding our “niche”. This means striving towards a future in which ecosystems and the biosphere can support participation by a variety of species, including humans. Ecosystems and other living systems respond to human influence, as is all too apparent in the destructive effects of human culture so far; they will also respond to human attempts to fit in.

This book has two primary objectives:

- ❖ ***To present systemic management, and the science upon which it depends, as a replacement for conventional forms of management.*** Systemic management is based on a synthesis of management tenets developed in the last several decades (especially for application to ecosystems). However, as described here, systemic management can be applied over a range of levels, including management of our relationships with other species, our use of ecosystems, and our influence on the biosphere.
- ❖ ***To describe an empirical methodology that can serve as a guidance system for achieving sustainable relationships between humans, other species, ecosystems, and the biosphere.*** This methodology, using probability distributions observed for other species (species frequency distributions, see e.g., Fowler and Perez 1999, Fowler and Hobbs 2002), is derived from the lessons of nature, and is therefore more reliable than methods derived from human concepts, which are necessarily limited by human understanding of nature. The examples in this book, drawn from the sustainability observed among other species, reveal what is required to be a successful species. Other species don't have a choice. We do.

However, defining and then being a successful species is a complex matter. Complicated relationships with our environment include countless interactions with other species, and management decisions have to involve social, religious, ethnic, political, ethical, and economic elements. Application of systemic management, using the methodology described here, would promote actions and decisions by people, institutions, and society. These actions would be in accord with the laws of nature, especially those applying to the biological systems of which we are a part, and involving time scales we ordinarily ignore.

This chapter summarizes the underlying concepts of the book and includes:

- ❖ A critique of conventional “transitive” management approaches and definition of an alternative “intransitive” approach — systemic management.

- ❖ A synthesis of management tenets, developed for application to ecosystems, which form the basis of systemic management.
- ❖ A review of the motivation for change to systemic management as a wholly different approach to management.
- ❖ Introduction of the methodology used as guidance for systemic management as applied to the Bering Sea, an ecosystem example that will be developed at the end of each subsequent chapter.
- ❖ A summary and preview of the progression of concepts found in the book.

Systemic management as human self-control (especially when extended to the species level) emerges as the only option that both accounts for complexity and simultaneously serves as a form of management that applies not only to our interactions with ecosystems (ecosystem application), but also to our interactions with the biosphere (biosphere application). At the same time, it resolves the enigmas created by questions regarding the relative importance of human needs compared to those of other species, long-term versus short-term human needs, and broad-scale versus small-scale considerations.