

Preface

Our Pacific Way

Here in the Pacific, as island jurisdictions, we share many of the same environmental problems. We also share many of the same cultural, social, and economic challenges. Many of our traditional practices and innermost values are likewise the same. We value our cultural heritage. We value storytelling. We respect our elders and our elected leaders. We seek a consensus when we are making important decisions. We enjoy using the resources of our lands and nearshore seas for our food and our well being. We treasure our close family ties. We share what we have. We help each other in times of disaster. We welcome visitors. We often eat in family and communal settings. We love our children. We also love our land and our nearshore seas.

Looking across the Pacific, we see that sometimes there are valid historic and linguistic reasons why we are not all brothers and sisters. Oftentimes there are not. While we are all unique, the fact is we are all Pacific islanders. When we gather together, invariably we can all identify with the concept that there is in fact, a “Pacific Way”.

Our Project’s Guiding Principle, Standards, and Objectives

Here in these islands, more so than anywhere else really, in order to accommodate the needs of our growing populations, we must manage our limited and fragile resources very, very wisely. As we develop our economies, we need to preserve both our ecosystems and our communities. We must strive hard to maintain our island attractiveness as well as our civil principles of right and wrong, our individual and communal health, and our personal self worth and pride. How can, and how should we do this? What is the correct ratio between fostering and controlling development?

Here in the CNMI, we have already experienced the problems of “progressing” too much, too quickly. Yet given our modern economy, both we and our children will need an adequate income to sustain our livelihoods. “How fast” versus “how controlled” we want our islands’ development to take place are critical questions. This book is written to help empower you, our future island leaders, to make such critical decisions wisely.

One generally accepted guiding principle is the concept of “sustainable development.” It means using our resources today only in a manner that will not refrain our future generations from enjoying them in their same condition. We must ask ourselves—as a result of each decision we make today—will our children be able to have, or be able to afford their necessities? Will they lead at least as high a quality of life as we do? Will they get to appreciate our BENADO and our YÁFF traditional foods? Will they

be able to observe these animals in their wild habitats? One food item we absolutely cannot harvest any longer is the FANIHI, this we know. Doing so would cause its extinction. Our wildlife scientists can attest to the fact that only a relative few are still left here in our islands, particularly on our southernmost islands of Saipan, Tinian, and Rota.

Will our children’s children swim and fish in our coastal waters or drink from the groundwater which we will leave for them? Will we recognize our responsibility to protect and provide for our islands’ endangered life forms and habitats in time to prevent further species extinctions? Will each of us be willing to invest the finances and time necessary to cause our island and nearshore environments to remain or develop the way we want them to be?

Ownership-wise, many of the resources within our Commonwealth belong to the “public.” “Who?,” one might ask. Who exactly is this “public?” Well, of course, it is all of us. Through elections we choose and assign certain people to carry out our wishes. Others are appointed by those we elect. In the end, however, each public official is responsible to each of us. We place these leaders into their respective offices, and under the CNMI Constitution, we continually task each to carry out their duty to serve our public needs. Our civic duty lies in ensuring that they, in fact, do this. We also must constantly inform our leaders of what we want and what we do not want.

Here in the CNMI, our leaders often apply “the Pacific Way”, and attempt to find a consensus on the public issues at hand. We demand an open and transparent government. We mandate that our laws provide everyone with adequate opportunities to let their voices and opinions be heard. Most of our environmental and cultural resource regulations were developed only after extensive discussions with—and the finding of common agreements amongst—both the industries regulated and the agencies tasked to do the regulating.

We also have community standards. We do not tolerate polluters or cultural resource destroyers. We require each major development to occur without causing significant adverse impacts to our cultural and natural environments. We vigorously enforce permit requirements and we provide opportunities for legally-binding appeals under US law. We encourage all to understand their environmental rights—and to become strong advocates for their protection.

This book is designed to provide you, our reader, with the language, facts, and principles of our islands' ecology and our island resource management regimes. A good appreciation and "command" of each of these will make us better able to voice our concerns when needing to do so. In truth, another common trait of us islanders is that we hate, truly hate, to embarrass ourselves or anyone else. Yet we know that to be responsible island stewards, we must get involved. To do so effectively, we all need to know what we are talking about. These are our homes. To protect them, we all need to speak out publicly and to write clearly, sincerely, and often on all of the issues which concern us and our children.

Our Sequential Approach

We begin with an invitation to explore our island chain's ecology, a briefing on active learning techniques, an introduction to the scientific method, and a short history of conservation. Our islands' history and our archipelago's geography and submarine bathymetry are introduced. Principles of geology and meteorology are discussed next. Ecology principles, classification, and evolutionary mechanisms then follow.

Our ecological communities are then each explored, beginning with the open ocean and moving inland. Representative life forms for each are illustrated and described. Management principles for island and marine natural resources follow. We include a thorough section on the marketing and buying of consumer goods and the special economics of resource conservation and development. Finally, techniques for both managing our island's development and effectively preventing and controlling pollution are shared. We close with a chapter on principles of building and community design and aesthetics.

Our Writing Style

Our readers will find that we developed this book to be both locally relevant and very reader-friendly. We use color graphics extensively. Even non-readers should be able to stay in touch with course lessons and content. We use much public domain and other extant text and graphics materials when appropriate, always with standard and specific permissions. We maintain appropriate on-grade reading levels and a high percentage of active sentences. We incorporate examples from our own Northern Mariana Islands whenever it's appropriate to do so. We include both of our indigenous languages' flora and fauna names (CHAMORRO and CAROLINIAN) throughout. To differentiate between these, Carolinian names are underlined and both are in small caps font. This is done in addition to using conventional scientific names (*italics*) and English common names.

We use Bookman Old Style for our principle font. Our point size is ten. For ease of reading we use a single, 4½ inch wide text column and we use a wide 9½ inch page to allow for larger graphic images. Although our chapters vary in length from about ten to twenty five pages, our paragraph lengths are consistently kept short, averaging from three to five lines. We use an outline numbering system to make it easy for instructors to refer to when giving reading assignments and for discussing topic sec-

tions. We use colors to highlight our subchapter (**GREEN**) and subchapter section (**Blue**) headings. Introduced terms are **bold-faced** and defined in our extensive glossary.

Our Several Perspectives and Emphasized Concerns

Our readers will undoubtedly discover occasions when opinions shared by our several authors seemingly conflict with one another. Such is the nature of academic discourse. This is especially true when a single book such as this includes more than one author and more than one discipline. The science of ecology draws from many sciences, ranging from entomology to meteorology. Resource management encompasses science, economics, technology, politics, and societies' public interests. From these varied ideas and guiding principles our civil society derives a synthetic "best" management approach.

Likewise, there may be occasions where a point made by one of our authors is repeated again in a later chapter. While we attempted to edit out most redundancies, some were intentionally left in, in order to add emphasis to our foremost concerns. An example would be our critical need to better understand and value our island's topsoil and its protective plant cover. Another is appreciating our dependence upon our rain and groundwater, and our dire needs to conserve water and prevent water pollution. Several chapters discuss these topics, each from different and important perspectives.

We dedicate three full chapters to studying and caring for our coral reefs, and three as well, on dealing with our common pollution sources. We discuss endangered species within their specific habitat chapters and again as an entire chapter of their own. Several times we emphasize our need to prevent alien species introductions and we dedicated an entire chapter to the dire threat of the Brown Treesnake. Finally, we discuss the nature of our Commonwealth's economic and infrastructure systems over several chapters and units.

Our Common Caveat

While scientific understanding often gets updated through time, facts, principles, and explanatory terms usually do not. Politics, societal values, and economies, on the other hand, do change, oftentimes dramatically. Significant changes in our economic conditions occurred, for example, several times between the time we began writing this book and the time it finally goes to press.

Readers will notice we will often declare the caveat (warning notice), "at the time of this book's writing". We do this to place into a time context the topic about which we are writing. In truth, this phrase is applicable to our entire book. Each condition we describe was true, at least from the perspective of each chapter's author, at the time he or she wrote about it. As you read this book, keep in mind the phrase "time passes". The specific political, economic, social, and environmental conditions you find yourself in will likely be vastly different from ours. Ours is vastly different from our forefathers.

Our Uncommon Authorization to "Cut and Paste"

To responsibly address the "constancy of change" and "text-topic

dating” issues, we, the authors, do something which is a bit unusual. In fact, it is almost unheard of in the publishing world, except perhaps in the rapidly developing world of open-source publishing on the Internet. We not only share our thoughts with you, we also “bestow” our text to you, our reader. You are free—invited in fact—to professionally-develop updates and to republish this book whenever you see the need. An updated noncommercial, public interest edition every five years or so would certainly be fitting.

We also recognize the growing educational importance of computers, compact discs, and the use of the Internet. With this in mind, a digital file of our work, in PDF format, will ultimately be made available for worldwide educational reference. Updating such a reference makes for a great interagency and inter-school-system cooperative project. Get such a project going if you feel it’s needed. You have our permission. Develop extension materials as well. Projects, field exercises, presentations, etc., can all benefit from this source material.

We also invite education leaders, resource managers, and concerned island residents of island jurisdictions, other than our own CNMI, to cut and paste from our work to the extent you deem valuable and applicable. You have our sincere invitation to model, remodel, or in fact, just republish sections of this book, adjusting for local species names and depictions, location descriptions, political systems, etc.

We invite you to publish your own *Island Ecology and Resource Management* book through your own governments and school systems in whatever form best fits your islands’ needs. You may use all of our text and any of the non-copyright graphics we have gathered, provided they are reproduced only for nonprofit educational purposes as allowed in accordance with standard copyright laws.

Our experience has been that when we explained our situation and purpose, permissions to use were readily forthcoming. Hundreds of people have given their permission for us to use their materials in this collective work. We are very certain that if you request, they will likely provide the same to you for your islands’ ecology and resource management text effort.

Instructor Resources

A presently-being-updated CD, including digital files with avenues of applicable resource material, is being made available for those CNMI-based courses which use this text. Contact the lead author (email address at the end of the book) or the CNMI Public School System or Northern Marianas College directly. Included are known chapter-supportive academic journal articles; website addresses; significant news articles; recommended application software; maps; remotely-sensed images; posters; flyers; other CD’s, DVD’s and movies; recommended books; known local voucher specimen holdings; known local resource speakers; etc. Additional support materials, including PowerPoint slide collections, chapter-specific orientation videos, and science activities are currently being finalized and should soon be readily available to instructors.

Conclusion

We, the authors, hope you find our book interesting, stimulating, and thought-provoking. We think you will be able to tell we thoroughly enjoyed putting it together.

